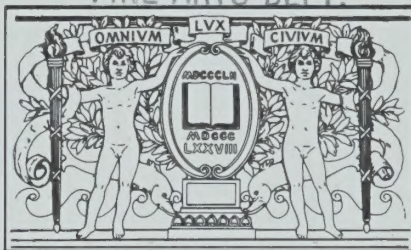
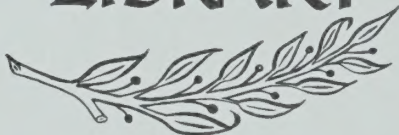


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A RESIDENCE AT GERMANTOWN, PA.

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No. 195

JANUARY, 1902

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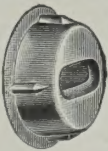
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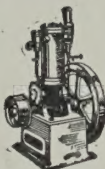
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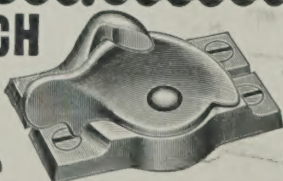
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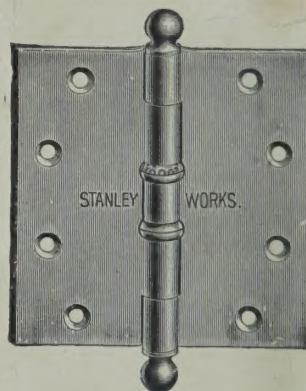
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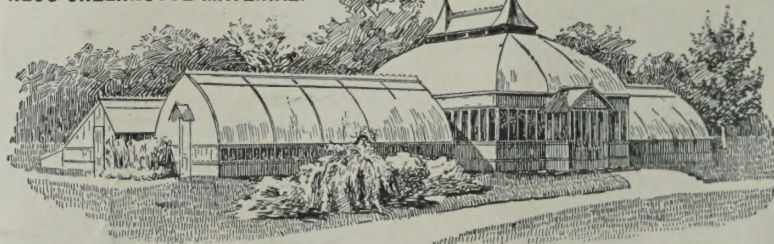
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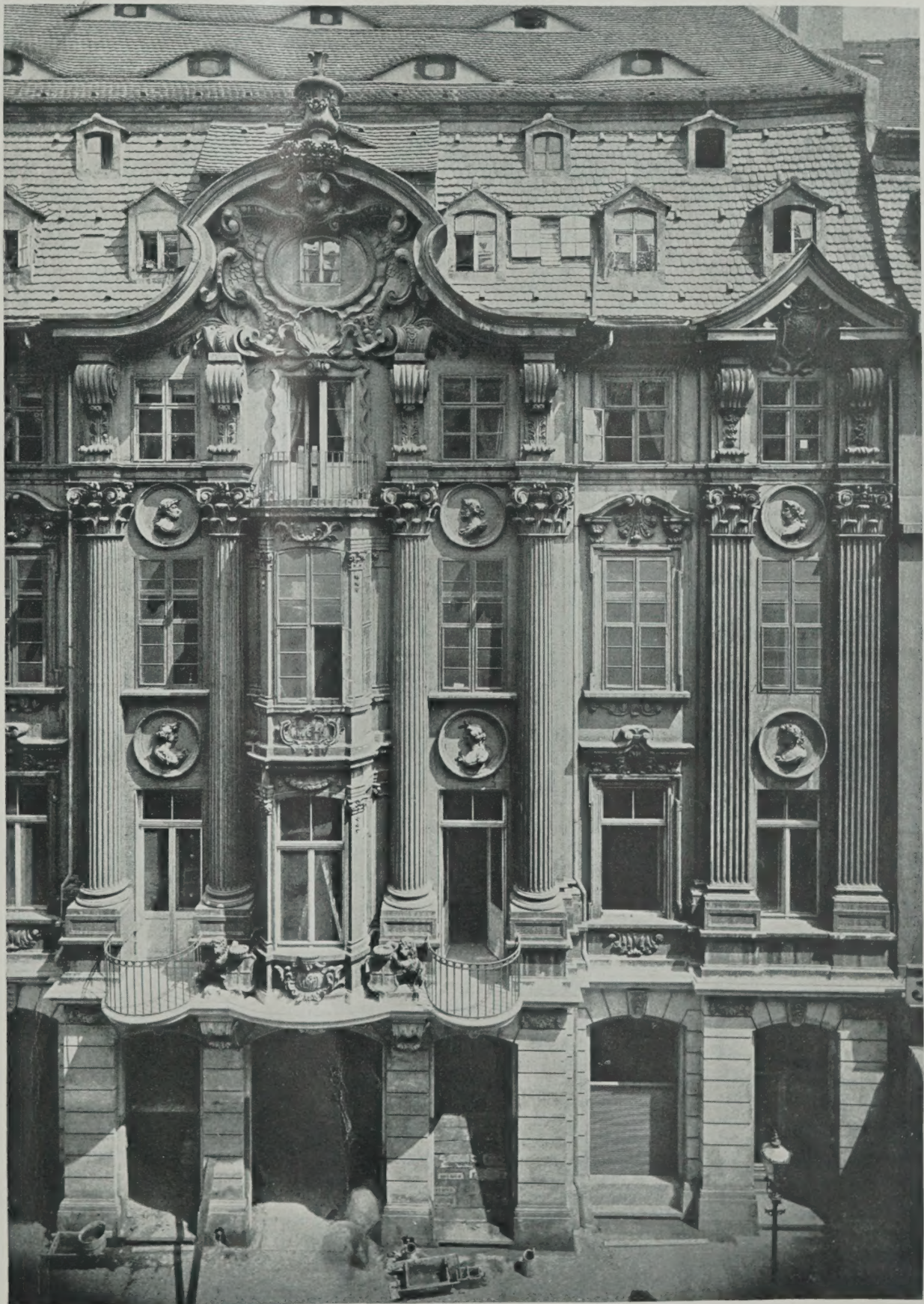
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MONTHLY COMMENT.

THE year 1901 will pass into architectural history as distinguished by one considerable architectural success which failed utterly to win commercial success. The ill-fated Pan-American Exposition at Buffalo was the one really distinguished feature of the year in America; and yet, though artistically interesting, it failed to obtain popular support and closed heavily in debt and with disastrous results to most of those concerned financially with it. The terrible tragedy of September naturally put an end to whatever hopes may have been held of recouping earlier losses by later successes; it was singularly bad taste for the management to put forth a plea that it was the patriotic duty of every American to visit the Exposition after the burial of President McKinley; it would have seemed, on the contrary, both right and natural for every patriotic American to have shrunk with horror from a spot that is indelibly associated with so dreadful a crime.

The present year will doubtless early see the complete removal of the Buffalo Exposition buildings; if they were our most notable contribution to architecture in 1901, what, then, will remain to stand for that year? Like many another year, it will be averages alone that count. No conspicuously great building was begun or completed and no architectural undertaking planned that was really a great work of art. Yet it was not an idle year in architecture. Most of our architects have been busily engaged on work that has consumed their entire energies and led to a great augmentation of their office forces. In some respects it has been the best year the architects have had for some time. But their successes have been measured by commissions and not by artistic results. There has been plenty of work and not much study; there was no time for study because work was plenty. The year differed only from other years in the abundance of work. And yet, if architecture is an art, its progress must be measured by art and by results; the individual bank accounts of the architects have nothing to do with its progress.

It would seem, indeed, not unreasonable to ask that, of the thousands of buildings erected in America during the past year at least one might stand out from the others as a real work of art, a milestone in artistic progress, a building that, if not epoch-making, would itself have marked the epoch. Apparently we must content ourselves with averages in architecture, for it is by average improvement, steady betterment, advances step by step, that progress has been made in building in this country. If we have produced no great work of architecture, we have at least not stood still. The buildings being erected to-day show many improvements over those built ten or twenty years ago. Our architects are better trained; their draftsmen are more skilful; if they do not always know better how to design, they at least have an ampler knowledge of architectural resources; what they can not think up for themselves they can at least borrow with some general familiarity of the places wherein successful loans of ideas may be negotiated. All of this may not be very inspiring or very noble, but it summarizes the conditions under which architecture is now being produced in the United States, and it is possible it completely explains why no really great works of art are produced.

Ever since a certain distinguished naval hero was welcomed in New York with a triumphal arch of staff, erected by the municipality and designed and decorated without cost by the most distinguished sculptors of New York, there has been a persistent agitation within circles artistic and otherwise for the erection of a great arch in permanent stone. It does not seem to matter to whom or for what the arch is erected just so long as it is built, nor, in fact, where it is put up. The temporary arch in New York, having a naval significance, it was very early pointed out how greatly our navy needed an arch in stone and marble at some convenient point in New York. The various efforts to supply this need do not appear to have met with that hearty public response its projectors hoped for, and a fresh aspect has been given to the project by a proposal for a McKinley Arch. Every one must look forward to the time when the memory of President McKinley will be suitably honored in a great work of art; but there is not the least reason in the world why this memorial should take the form of an arch. A monumental arch is a Roman triumphal monument, and it can never be anything else; and every later arch has been the adoption of or modification of a monument designed by the Romans and given definite character by them. It is impossible to get away from this fundamental and historic fact. What, then, has President McKinley, or any other American great man, to do with a Roman triumphal monument? Yet the arch mania is very pronounced in this country, and the arch makers seem bound to build one at all costs. Meanwhile, those who care to study arches as they are built in America, will find food for thought in the Soldiers' and Sailors' Arch in Brooklyn. Those who make a pilgrimage to that monument should not fail to stand beneath it, for there they will see some of the queerest sculptures ever put into permanent form.

EVERY one knows that the mere man architect is not always competent to properly arrange the fixtures and conveniences of the household, but the deductions drawn by the lady occupants are sometimes amazing. Here is a lady airing some woes of country living in a fashion journal, who evidently is a master hand in detecting cause and effect.

"The improvement of the building plans of houses in the country," she says, "would be an excellent subject for some of the young women architects. As it is, the closet shelf is too high to be within range of the housewife's eye. Carpenters seem to be all tall men; and, judging by the position of wash basins, laundry tubs and sinks, plumbers are short men. Our maids go on using the apparatus, wasting strength because they do not know how to explain the reasons why the work is too hard. The mistress also fails to find the cause and is helpless as to the remedy. In the country there is land enough to permit of a separate laundry and ironing room, in connection with the clothesyard, which may be protected from marauding dogs and chickens by wire netting. In this way the house may be kept cool and dry. Wood and charcoal may, on occasions at least, be used for cooking, obviating the long after-heat of the coal range."

MUNICIPAL ART.

APPARENTLY a new headline has been added to the stock of the daily papers and the periodical press, for the fascinating terms "Municipal Art" and the "City Beautiful," stare one in the face from almost every printed page. Scarcely had a new mayor been elected in New York than certain of the weighty organs which are published for the sole purpose of enlightening public opinion in the benighted metropolis broke forth into conjecture and suggestion as to what his honor-elect might do in the way of beautifying his town and improving the aspects of things generally; incidentally, it was further remarked that certain painters and decorators would be benefited.

Two facts are very apparent; first, the movement for what is called "Municipal Art" is now widely spread; and secondly, it has not yet "found itself." That there is now a very general discussion of the subject in very many places is evident to all, and it must be equally evident that much of the discussion is beside the mark, fruitless and without that definite aim and broad conception which must characterize all true "movements" that can hope for success or finally obtain it.

Persistent discussion of any subject is always likely to produce results. A few years ago the whole country was convulsed with a political struggle of almost unparalleled intensity because a certain financial question was being discussed by a single man gifted with a great vocabulary and wonderful oratorical powers. It was completely demonstrated that one voice could make itself heard in our great population of 70,000,000; and it was heard to such an extent that very many persons were induced to follow the gifted orator into the voting booths. The results in this case were not those which were anticipated by the new propagandist, but it was finely demonstrated that while active discussion and prolonged agitation may excite interest, arouse feeling, and find supporters, it can not win in the United States unless it has behind it a realization of the greatest good for the greatest number, and unless the question in itself has a basis of intrinsic worth that appeals to the whole people. If the political episode here referred to teaches anything, it is this: that a problem proposed to the American people must have real merit in itself, or it will fail.

But, exclaim the supporters of municipal art, the city beautiful is a real problem, and it has real merit; it aims to make the city beautiful, to redeem the sordid aspects of American communities, to supplant horror with beauty and help life by surrounding the people with real works of real art. That is very true, and even the slightest effort in such directions must win support and be entitled to consideration; but mere adornment will not in itself produce the end aimed at nor will it amount to more than a ripple on the surface of the great questions with which the American people are deeply concerned.

The question has not "found itself"; it is not proposed on broad, general lines; positions and principles are not stated; the true elements of popular support are wanting. Thus far there has been too much superficiality. Let us, we are told, put a picture here, place a fountain there, open a vista from this point of view, hang a picture of a distinguished statesman in such and such a public room. Several years ago, when New York possessed an organization known as the Municipal Art Society, that body presented a painted decoration to the city, which was placed in a court room in the Criminal Court House. It was a well meant offering, no doubt, but the criminals brought to the bar before it are not likely to appreciate it, and the populace at large have a healthy feeling that the less they are seen in the criminal courts the better it is for the freedom of their persons and the purity of their reputations.

Municipal art, to succeed in America, must proceed on broader lines than this. It must not, as it now tends to be, be an artists' movement, supported and developed to provide commissions for hungry artists. It must be a movement that touches the whole people and embraces every interest. It must not be a movement for pictures and statuary, for fountains and flag-poles, for lamp posts and inscribed tablets, but a movement looking to the real benefit of the people as a whole. It is a movement that must be broad and not narrow; and it must appeal to every one and not to artists and connoisseurs alone. It must begin, in short, not with monuments on Fifth Avenue, but with betterment to the East Side.

Every great city already possesses many elements looking toward that better external character which should be one of the principal ends of municipal art. Clean streets and beautiful parks are the basis of all municipal betterment. Cleanly living is, every time, to be preferred and honored above artistic living, unless that also be clean, wholesome, and sanitary. Artistic embellishment will not produce this, but is itself a fruit of public sanitation and the general improvement that follows a thorough cleansing. The architects come next in their great responsibility for municipal art; and that not in great public buildings, but in houses and tenements, in churches and every structure that presents a front or a part to a street. And yet, so strangely do things work out, not a few of the most ungainly, unsightly, most unartistic structures in our large cities have been designed, executed, and completed by architects clamoring loudly for municipal art, active in organizations looking toward that end, seeking public funds for special embellishments in isolated parts.

Truly municipal art has not "found itself," and its agitators, while offering a number of interesting individual proposals, have not yet established their claim for general support, without which little can be accomplished.

WARMING THE HOUSE.—IV.

STEAM AND HOT WATER HEATING.

THREE general types of heating are included under this head—low-pressure steam, high pressure steam, and hot water. Low-pressure steam and hot water are generally considered the most desirable systems; their method of operation is nearly identical, and both require constant care and attention in firing; the cost of the hot water plant is usually higher in installation. Hot water maintains a more uniform temperature than steam, although it does not respond so quickly in circulation and supply. Three methods are employed in their application: 1. Direct radiation, in which the heating fluid, either water or steam, is introduced into radiators placed in the rooms; 2, direct-indirect radiation, in which a supply of outer air is brought in at the base of the radiators, there warmed and then passes into the radiators; and 3, indirect radiation, in which radiators are placed in chambers in the basement, into which air from without is permitted to enter, and thence passes into the rooms through registers; its circulation is sometimes accelerated by fans and other mechanical devices.

The apparatus used for steam and hot water heating includes a boiler, main and branch steam supply pipes and main water return, with controlling valves; steam risers and water return pipes omitted in the single pipe system; radiators with valves and pipe connections in the various rooms for direct or direct-indirect radiation. The boilers are of the utmost diversity, horizontal tubular, vertical tubular, sectional wrought iron pipe, sectional cast iron or combination of cast and wrought iron. The horizontal and vertical tubular boilers and sectional boilers are set in brick work. The latter, which are of almost every possible shape and size, are generally more simply encased than the other types of boilers. Portable sectional boilers do not require a brick setting and are readily moved. The risers are contained within channels built in the walls and boxed in, or placed without the walls, enclosed, covered, or left free; the usual practise is to run them near the walls, properly finished and covered; this makes them readily accessible and permits rapid repair.

Radiators are made of wrought or cast iron, made in vertical loops or sections. They are commonly made of cast iron in sections. Coils differ from radiators in having a horizontal arrangement of the pipes, and are usually made of wrought iron pipes. Both apparatus are made in the greatest possible variety of shapes and forms to meet every imaginable requirement and condition. They should be placed in the coldest parts of the room, preferably before a window or any opening admitting cold air. In direct-indirect heating the radiator with an enclosed base is placed before a window; the air from without is admitted by openings or ducts, with dampers for regulating the supply.

The apparatus required for hot water heating is very similar to that used for steam heating, but includes, in addition to the boiler, an expansion tank, overflow pipe, and, frequently, an automatic water feeder to maintain the water at a proper level. Two general systems are in use, the closed and the open, sometimes called the high-pressure and low-pressure. The expansion tank is an indispensable feature and is placed above the highest radiator. It acts, in a measure, as a safety valve, and permits the water to relieve itself and prevents overpressure.

The hot water apparatus is liable to freeze, which is one of its most serious disadvantages. It does not respond quickly to the supply or discontinuance of heat,

and its first cost is considerable. With proper care, however, it forms a very useful and convenient mode of heating the house.

Other modes of heating, such as high-pressure steam, steam heating, either high or low pressure, with power plants, exhaust steam heating, and power fan or blower heating, are only available in very large buildings or in manufacturing plants, and do not, therefore, come within the scope of notes dealing with warming the house.

It may be well, in concluding these comments, to once more repeat that the particular system must be chosen to meet particular requirements. Hot water, for example, may, indeed, give the best general results, and yet not always be available for every case. Each problem calls for special treatment, and above all, an intelligent study of the special problems involved. It is this intelligent study, this careful application of the ascertained facts, that brings success to warming the house. American houses, as a rule, are much more

winter the conditions are very different. People dress differently and are differently affected by artificial heat. There is always a possibility of having more of it or of having less. There is a constant tendency to regulate it without a real understanding of what will result from the attempt to do so. No doubt there are many inefficient sources of household heat, but there is also a very widespread lack of knowledge on the subject.

CHARACTER IN ARCHITECTURE IN AMERICAN CITIES.

ACCEPTING New York and Chicago as representing certain miscarriages of democracy, each group so distinctive in its way, that I have called them the opposite poles or nodes, expressive of certain phases of degeneracy, afflicting our land and our people, we have but to turn, to regain our balance of view, to the country and the people at large. In passing let me say that I am not disposed to ignore or minimize the moral and mental forces, within those cities, which make for righteousness. On the contrary, I gladly recognize them and hope that some day they will prevail. But I do say they are not characteristic of those cities, and the balance of forces at present is heavily against them.

Such regenerative forces as do not exist in those cities I will class, therefore, with the upbuilding forces in the land and the people at large, to which they bear a much closer friendship.

Nor will it assist us materially to study the other cities, large and small—for strangely enough they lack definition of character to that degree which might make them typical from our point of view, and therefore useful to us. The originally vigorous Puritanism of Boston, the Catholicism of Baltimore, the Quakerism of Philadelphia, the slaveholding oligarchism of New Orleans and other Southern cities, the "river" epoch of Cincinnati and other "river" towns, the mining craze of San Francisco—are forces now long ago on the wane, and no definite rehabilitation of aspiring energies has led in any of these instances to a new and marked definition of character. The transition stage has been singularly protracted. They can offer us but little of suggestion, except in a negative or neutral sense.

The two cities of aggressively modern individuality, however harsh and discordant, are unquestionably Chicago and New York. The other cities resemble one or the other of these two more or less closely or remotely, but in no wise do they differ actively enough to offer us a third node. The country and the people at large

are to stand, in our view, for the characteristic force against which these two cities must be balanced—and that force is so vastly more powerful than they, although much less noisy, that our reckoning with it must of necessity take time and care.—Louis H. Sullivan in *The Interstate Architect*.

THE disposal of dirt, of dust, ashes, tin cans, sweepings, and the like is one of the most vexatious problems the housekeeper has to contend with. In the country much of the waste can be burned and otherwise disposed of in an unobjectionable manner, but the riddance of dirt in the suburbs and the cities is a more complicated problem, and notwithstanding the vast sums spent for its removal by our great municipalities, there are still many troubles for the housekeeper in this connection. And the problem is not less annoying when it is considered in its lesser aspects, and has to do with the cleaning of rugs and carpets, of curtains and furniture. Very much less of this is done than should be done from a sanitary standpoint, but even in its slightest aspect it is a serious domestic difficulty.

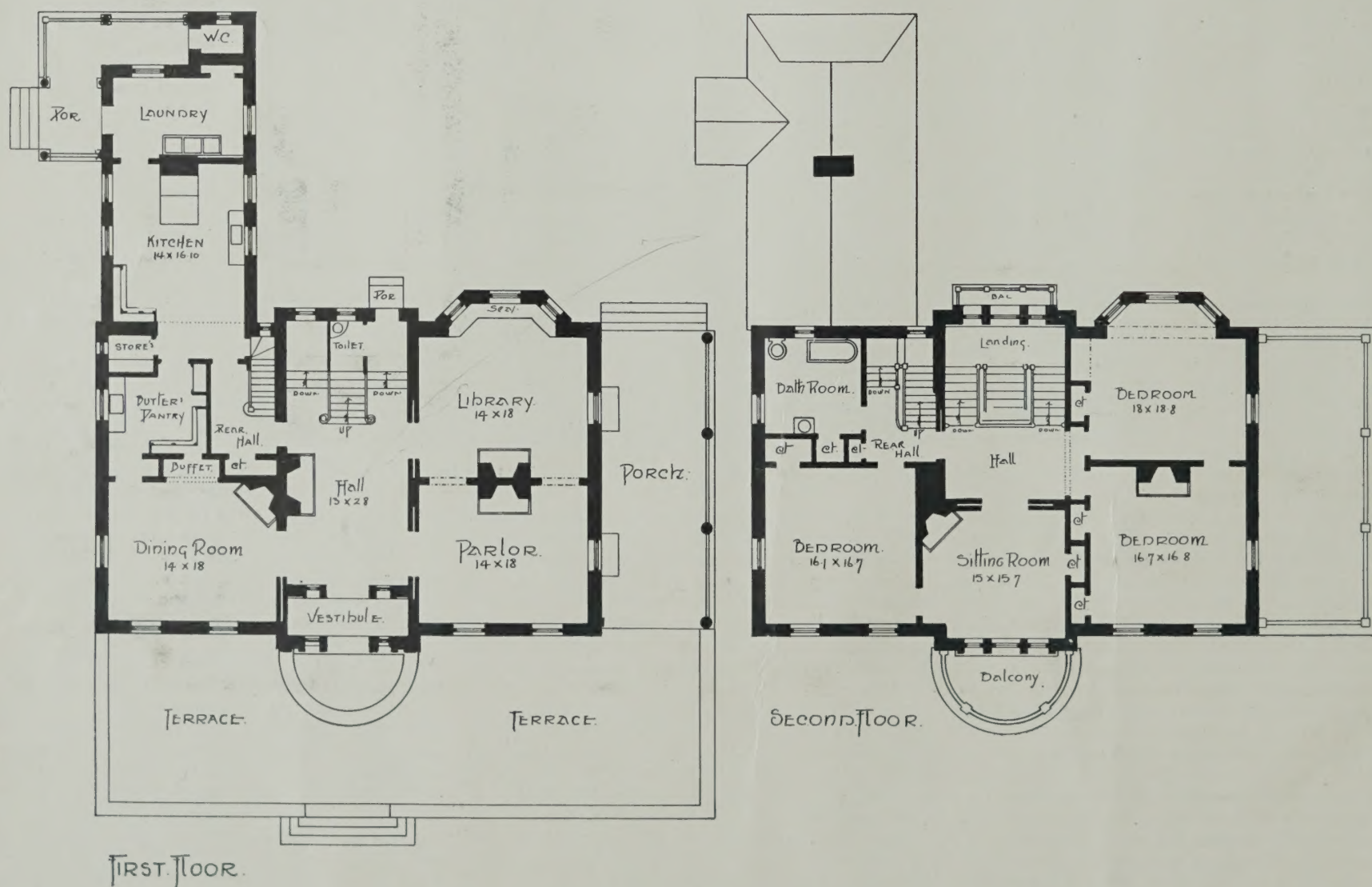


ANTIQUE COLONIAL MANTEL, BUILT IN 1771, AND PLACED IN PRESENT POSITION IN 1900.—See page 16.

warmly heated than English or Continental houses. Europeans protest against the superheated atmosphere of American houses; yet the problem of house heating has been carried to a much more successful issue in this country than abroad. Our houses may be warm—we certainly try to make them so—but they are more comfortable than the average European house, where the resources of American ingenuity in this matter are unknown.

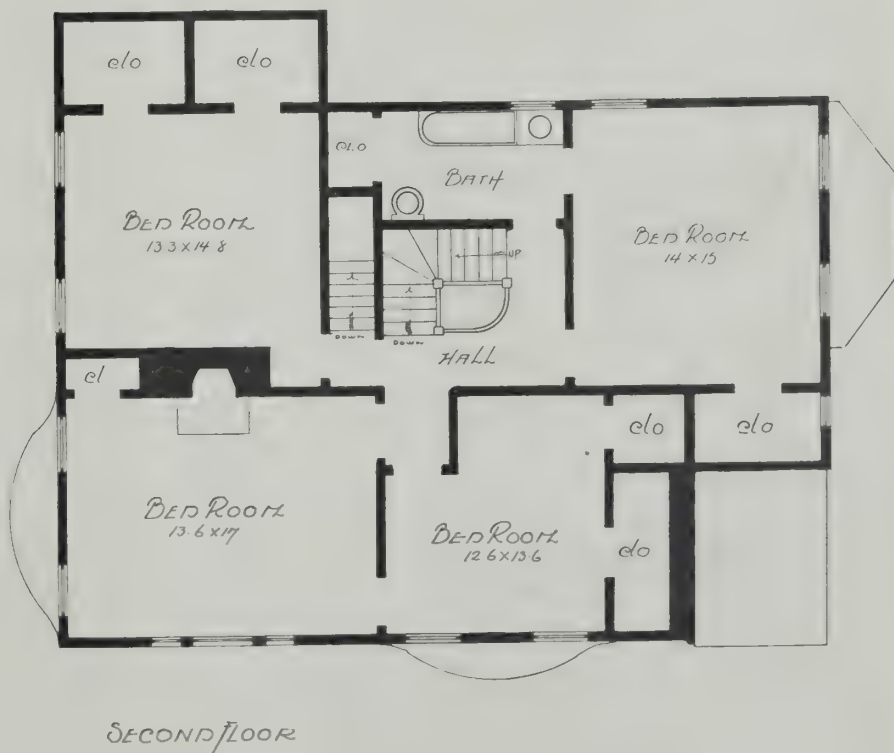
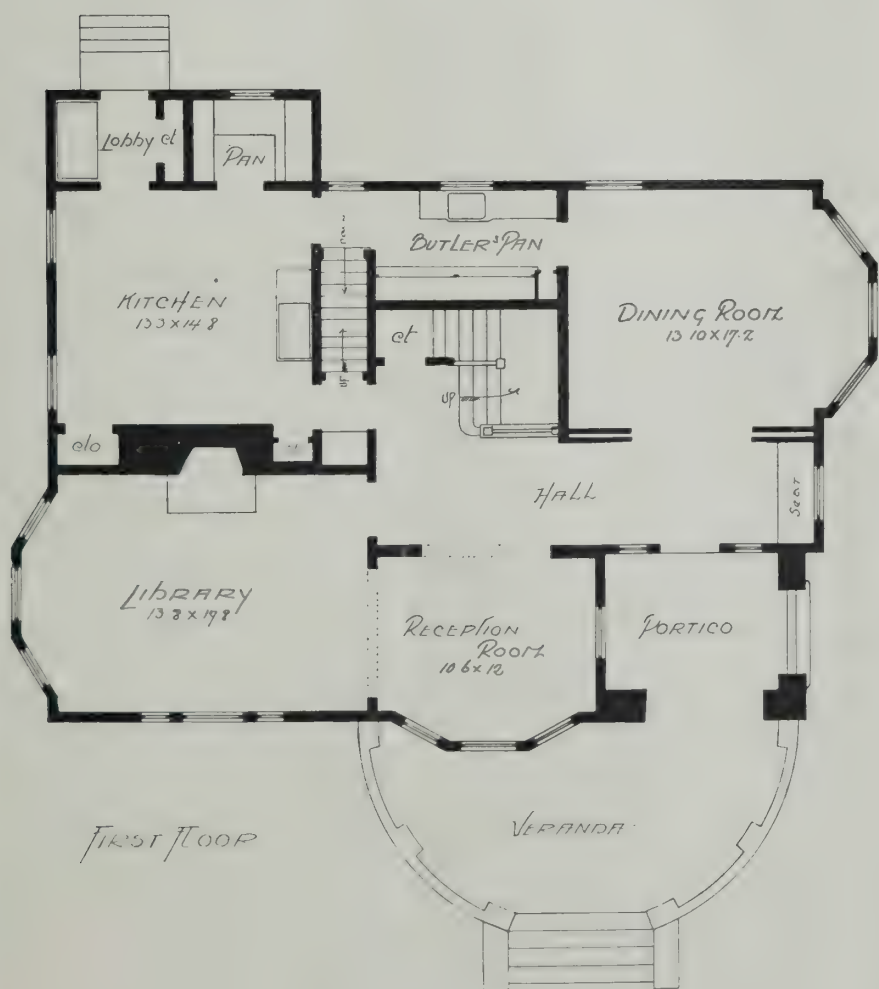
It is more than probable, however, that with all our progress, we have not yet reached a full understanding of the problem. There is too much waste, too much inefficient apparatus, too little understanding of the merits of different systems and the results that can be obtained from each. Nor have we thoroughly learned how to warm our houses properly. The extremes of heat and cold are too varied; we make our rooms too warm, or we suffer from an inefficient supply.

A very vexatious source of trouble with artificial heat is that all persons are not affected similarly by it. In the hot weather of summer we are generally painfully aware that we must submit to nature as we have it. In



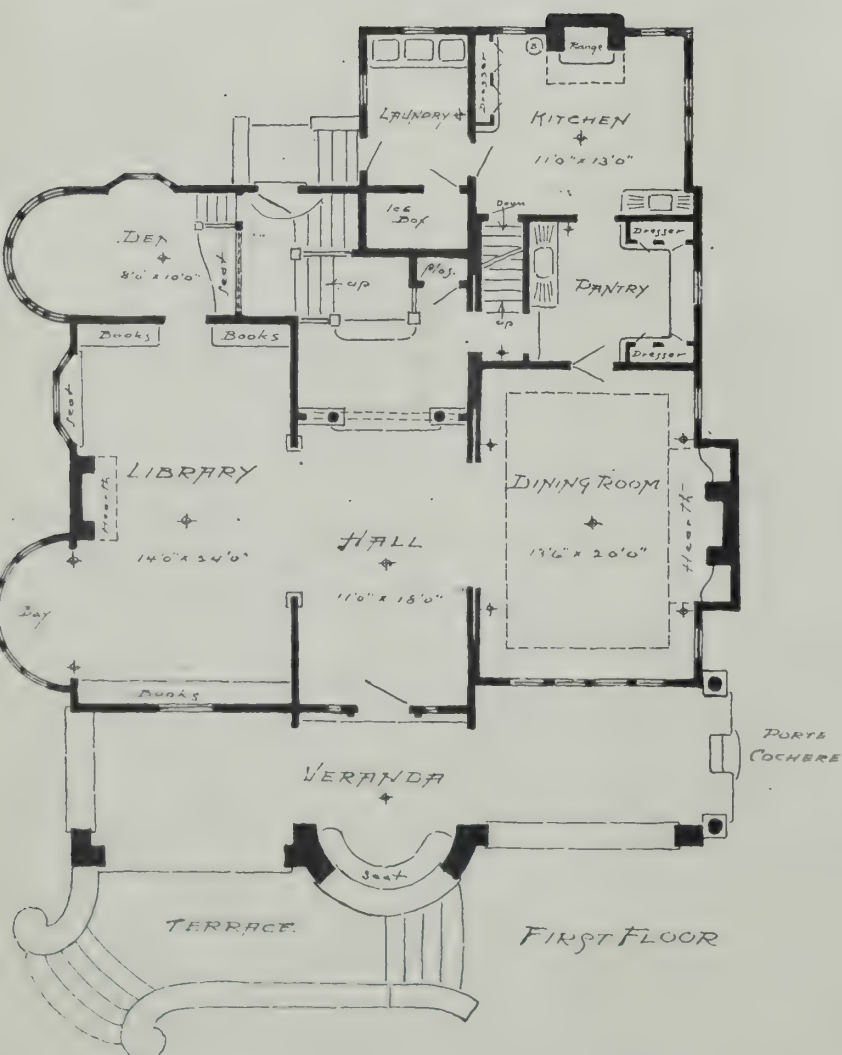
A RESIDENCE AT CARPENTER, GERMANTOWN, PA.—See page 15.

MR. LAURENCE VISSCHER BOYD, ARCHITECT.



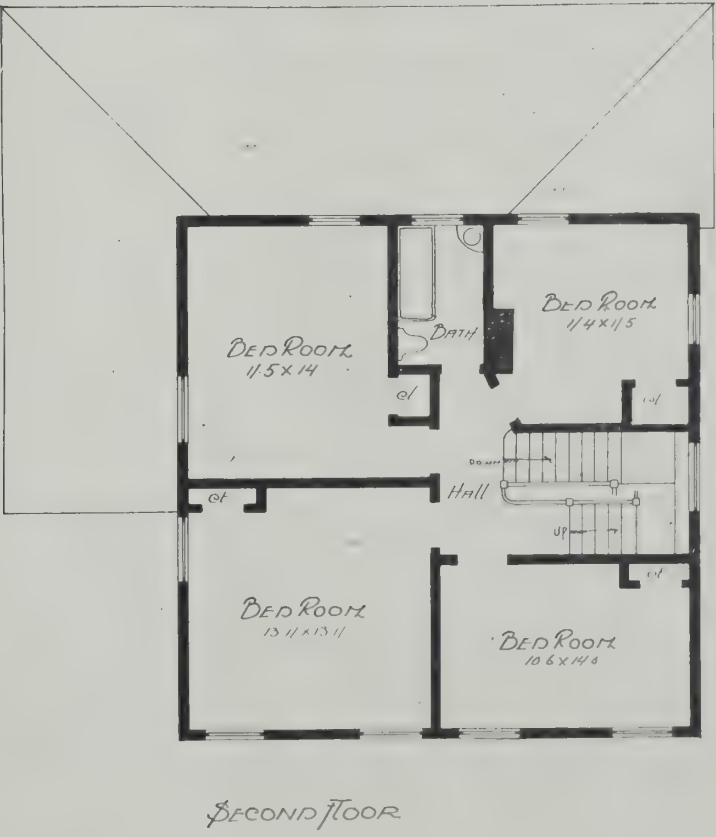
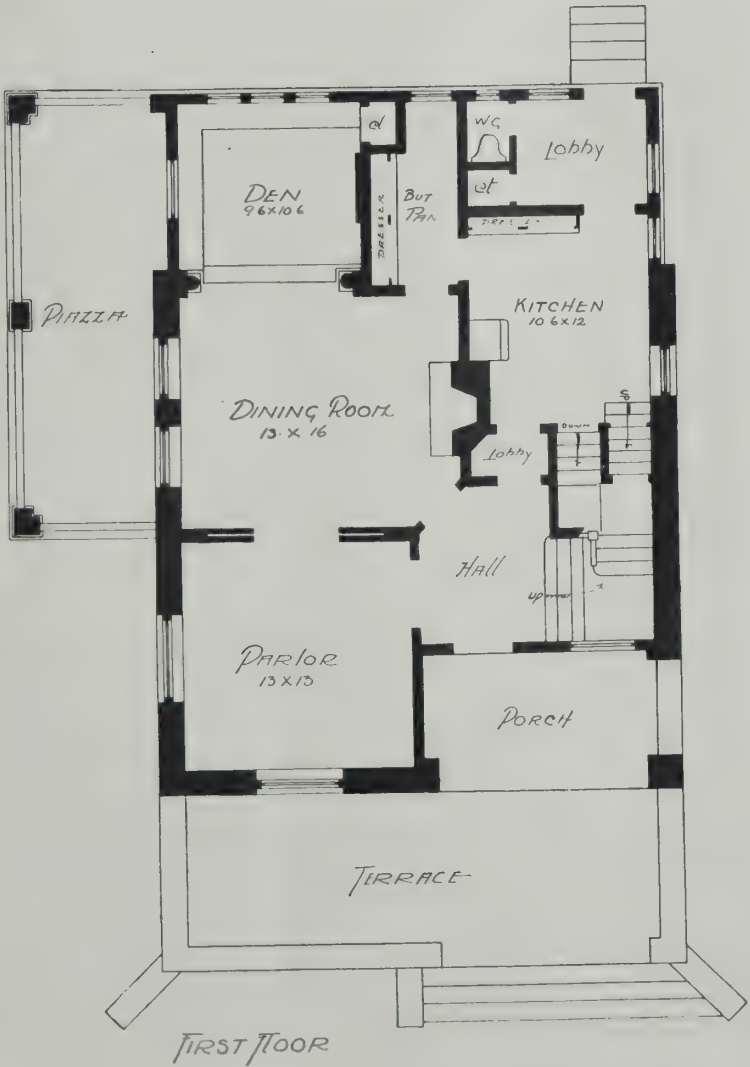
A RESIDENCE AT BOSTON, MASS.—See page 15.

MR. SAMUEL J. BROWN, ARCHITECT.

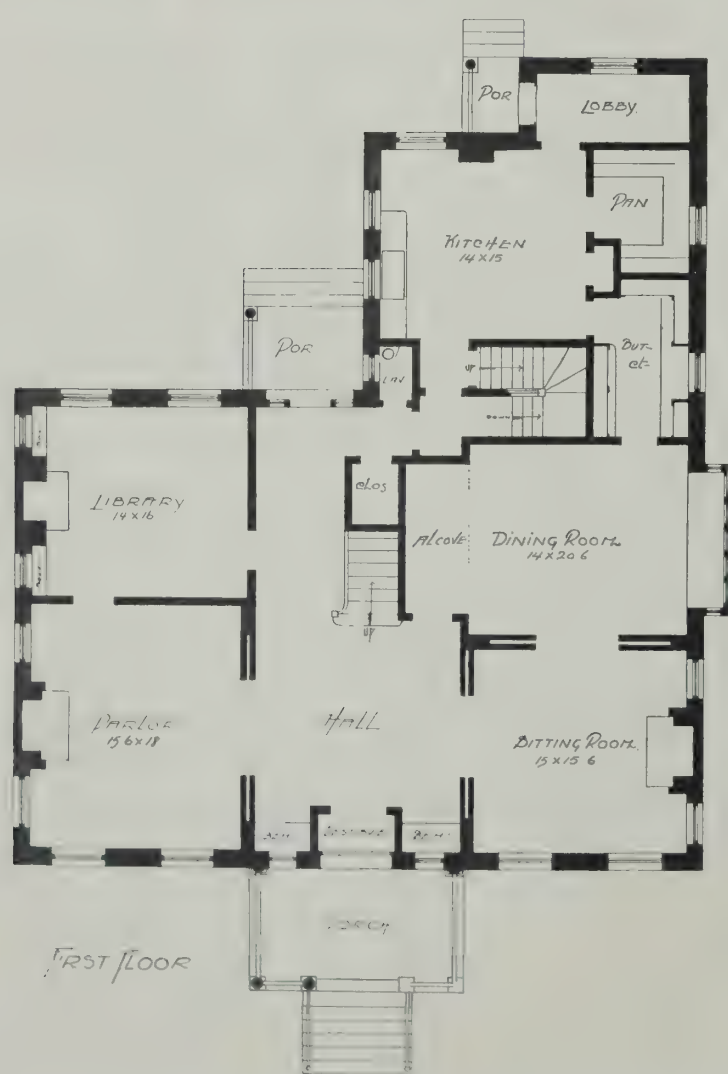


A RESIDENCE AT DYKER HEIGHTS, BOROUGH OF BROOKLYN, N. Y.—See page 15.

MR. C. SCHUBERT, ARCHITECT.



A MODERN RESIDENCE AT OGONTZ, PA.—See page 16.
MR. ALBERT ELLIS YARNALL, ARCHITECT.



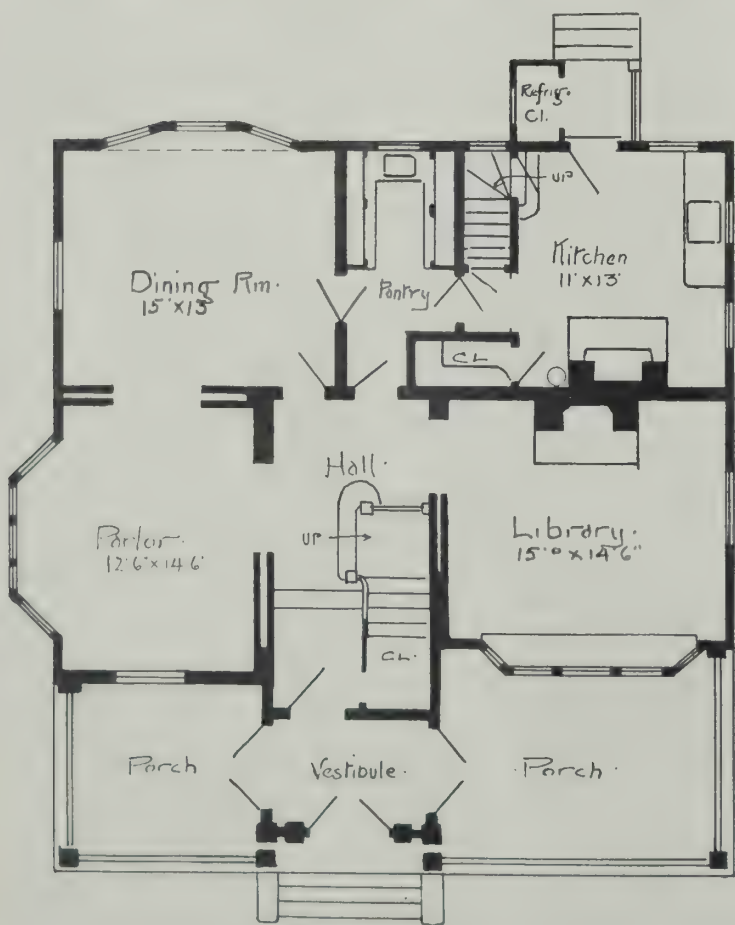
A RESIDENCE ON COMMONWEALTH AVENUE, BOSTON, MASS.—See page 16.

MR. EDWIN J. LEWIS, JR., ARCHITECT.

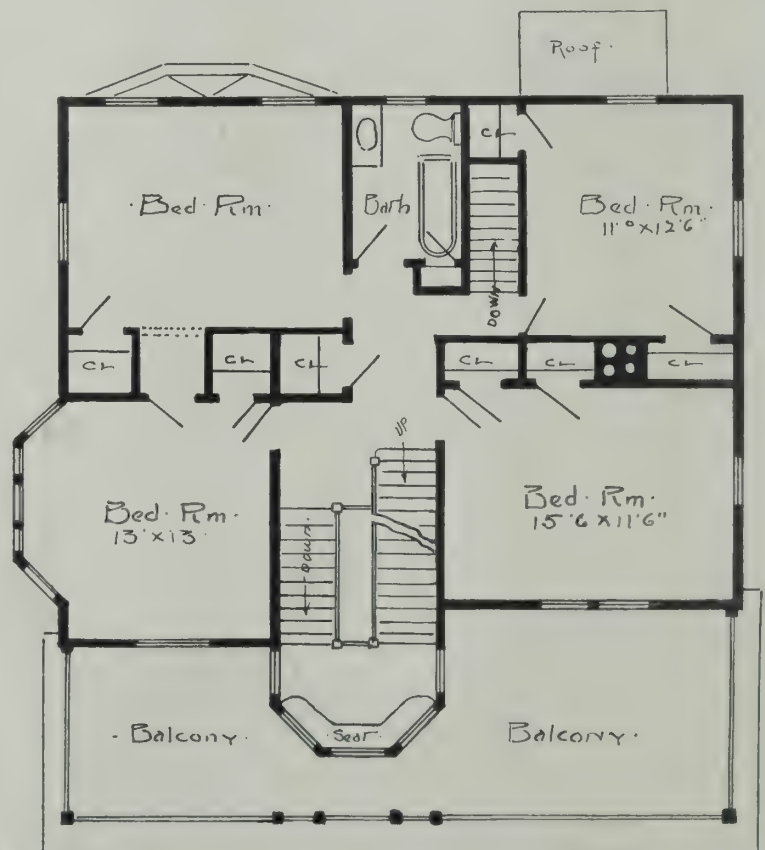


A RESIDENCE ON COMMONWEALTH AVENUE, BOSTON, MASS.—See page 16.

MR. EDWIN J. LEWIS, JR., ARCHITECT.



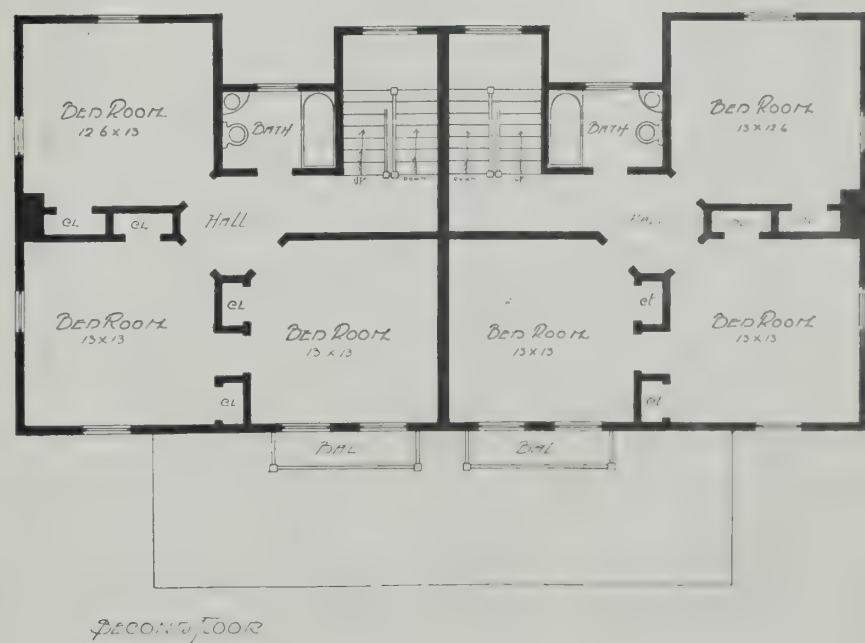
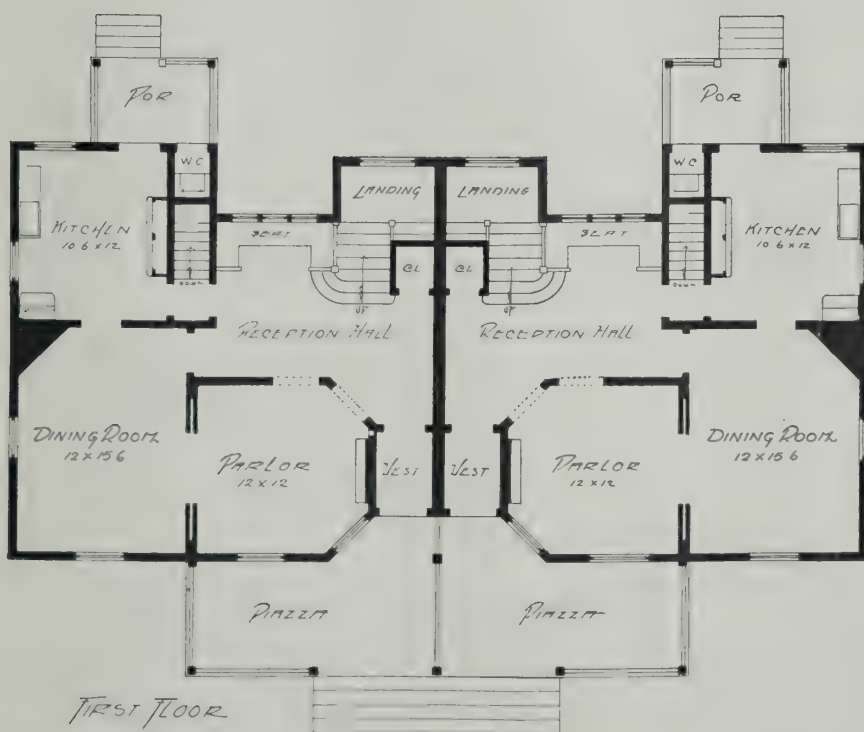
FIRST FLOOR.



SECOND FLOOR.

A DWELLING AT NEWARK, N. J.—See page 16.

MESSRS. HURD & SUTTON, ARCHITECTS.



A PAIR OF HOUSES AT GLENSIDE, PA.—See page 16.

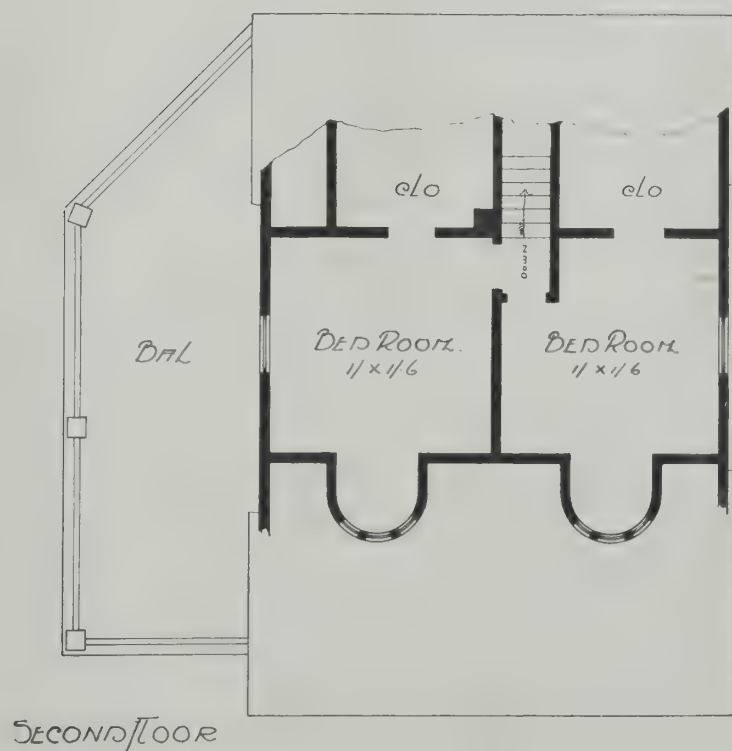
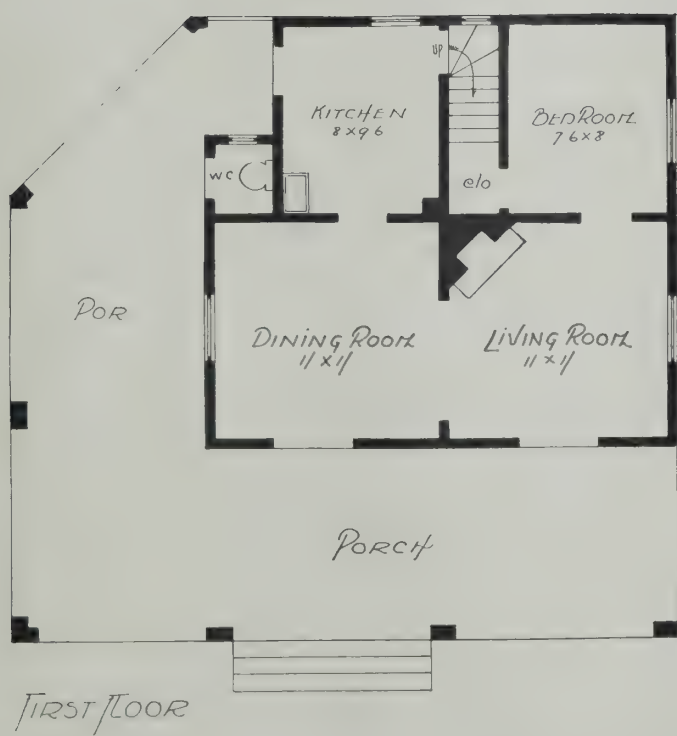
MESSRS. ALBERT ELLIS YARNALL AND E. A. WILSON, ARCHITECTS.



PORCH OF MR. CHANDLER'S HOUSE, CHESTNUT HILL, MASS.

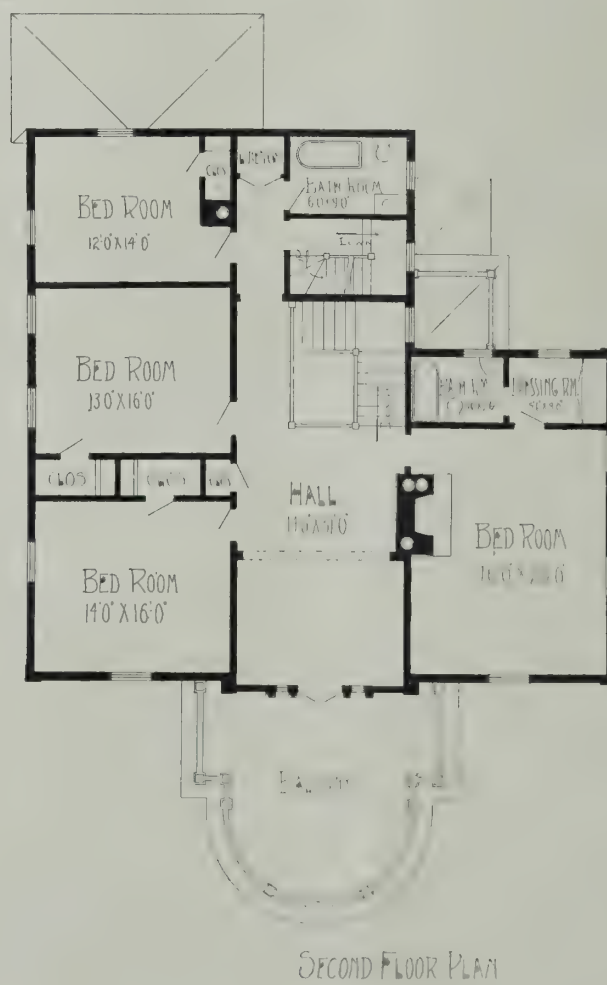


PORCH OF MR. BLANCHARD'S HOUSE AT CONCORD, MASS.



A SEVEN HUNDRED AND FIFTY DOLLAR SUMMER COTTAGE AT MONROE PARK, SOUTH HAVEN, MO.—See page 16.

MR. A. M. WORTHINGTON, ARCHITECT.



A COLONIAL RESIDENCE AT WATERBURY, CONN.—See page 17.

MR. WILFRED E. GRIGGS, ARCHITECT.

A RESIDENCE AT CARPENTER, GERMANTOWN, PA.

THE residence illustrated on page 4 has been recently completed for Henry M. McMurtie, Esq., at Carpenter, Germantown, Pa. The foundation to the terrace and to the building is of rock-faced blue granite. The floor of the terrace is paved with red brick. The building is constructed of hard burned brick, laid with a Flemish bond and in white mortar. This brickwork, with its rough effect, harmonizes nicely with the white trimmings and white blinds in the first story and the green blinds in the second. The roof is covered with shingles and is finished natural. Dimensions: Front, 54 ft.; side, main house, 36 ft.; including extension, 65 ft., exclusive of porch. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The interior arrangement is planned with a central hall, and the various rooms are located on each side of it. The vestibule is trimmed with white oak and has a

boards, and sink. The kitchen is trimmed with yellow pine and has a dresser, sink, pot-closet, and a slate hearth with a Spear range. The laundry is provided with Alberene tubs, and the rear porch contains a servants' closet. The second story contains a large open hall which is trimmed with oak, an attractive sitting-room opening from the hall by double sliding doors, three large bedrooms, seven large closets, and a bathroom; the latter is furnished with porcelain fixtures and exposed nickelplated plumbing. The entire floor, except the hall, is trimmed with pine and is treated with white enamel. The fireplaces on this floor have tiled facings and hearth and mantels of Colonial style. There are four rooms and ample storage on the third floor. The cemented cellar contains coal-bins and storage-room. The house is provided with electric light and gas, and it is heated by the central system plant. Mr. Laurence Visscher Boyd, architect,

white enamel. It contains an open fireplace furnished with a tiled hearth and facings and an ornamental mantel to harmonize with the room. The dining-room is trimmed with oak and has a paneled wainscoting and a plate rack. The butler's pantry is provided with a sink, drawers, dressers, and cupboards, complete. The kitchen is trimmed with pine, and it contains a sink, closets, pantry, and a lobby, and a Barstow range. The second floor contains four bedrooms, six large closets, and a bathroom; the latter is wainscoted and is furnished with porcelain fixtures and exposed plumbing. The floors in the principal rooms on the first story are laid with oak, and the floors in the second story are laid with hard pine. There are three bedrooms and trunk-room on the third floor. A cemented cellar contains a Barstow furnace, coal bins, laundry, and a cold storage. Mr. Samuel J. Brown, architect, 35 Congress street, Boston, Mass.



VIEW OF HALL AND STAIRWAY, COLONIAL RESIDENCE AT WATERBURY, CONN.—See page 17.

massive base, a wooden cornice, and a paved floor. The hall is trimmed with quartered white oak, and contains an open fireplace built of rock-faced blue granite with a square arch and a massive keystone which supports a blue slate shelf, and an ornamental staircase of oak with a central run which rises to a broad landing, from which the stairs divide and rise in separate flights to the second story. The parlor is treated with ivory-white trim and Colonial yellow walls. The fireplace has white enameled tile facings and a hearth, iron backs, brass trimmings, and a mantel of Colonial style with carved panels. The library is trimmed with oak, and has a pressed brick and terra-cotta fireplace and an attractive corner thrown into one end with a paneled bay. The bay window has a paneled seat. The dining-room is trimmed with oak. It has also a fireplace of attractive design, built of pressed brick and terra-cotta. The room is decorated with tapestry wall-paper to the height of five feet, and a plate-rack is placed the same distance from the floor. A serving table, with access to the butler's pantry, is provided with plate-glass doors. The large butler's pantry has drawers, dressers, cup-

Fifteenth street and Market street, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT BOSTON, MASS.

THE residence illustrated on page 5 was erected for J. P. Whitmore, Esq., at Boston, Mass. The underpinning is built of rock-faced blue-stone. The superstructure is of wood, and the exterior framework is covered with matched sheathing, good building paper, and then shingles; the latter are stained a soft brown color, with Cabot's shingle-stain, while the trimmings are painted a cream-white. The roof is covered with shingles and stained a red color. Dimensions: Front, 47 ft.; side, 36 ft., exclusive of piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The main hall is trimmed with white pine and is treated with white enamel, and has a paneled wainscoting, wooden cornice, paneled seat, and an ornamental staircase with enameled balusters, and mahogany rail. The reception-room is treated with white enamel, and is separated by archways. The library is trimmed with white pine and is treated with

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT DYKER HEIGHTS, BOROUGH OF BROOKLYN, N. Y.

A RESIDENCE which has been erected for Mr. H. E. Moller, at Dyker Heights, Borough of Brooklyn, New York, is shown on page 6. The foundation is built of blue stone. The building above is of wood, and the exterior framework is covered with matched sheathing paper and 6 x 18 cypress shingles. These shingles are stained with H. W. John's shingle-stain, a soft, light, brown color, while the trimmings are painted a dark green. The roof is also shingled. Dimensions: Front, 48 ft.; side, 44 ft., exclusive of the piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The main entrance to the place is from the corner of the site, by broad concrete steps to the top of the terrace, and continues over the lawn to the steps which rise to the terrace of the house. Here the piazza stretches across the front of the house, with the central portion enclosed and extending to the porte-cochère. A broad

Dutch door provides an entrance to the main central hall. The hall is finished in ivory-white with Buzzard plaster relief-frieze. The staircase hall is separated from the hall proper by an archway on a raised platform, supported on fluted columns with carved caps. All the openings are provided with fluted pilasters and carved capitals. The staircase has turned newel-posts, balusters, and rail. A short flight of steps leads to the den, from the third landing to the outside porch, and to the second story. The library is finished in golden oak, and it has bookcases built in around the room, 5 feet in height. The walls are covered with a red paper, rich in color, and with an Arabesque design. The transoms in the bay windows are brilliant in color. The open fireplace is furnished with a tiled hearth and facings, and a mantel of excellent design. The den and conservatory are treated in a somber style, with Turkish effect. The dining-room is treated with Flemish oak and has a paneled wainscoting 6 feet in height with plate shelf, a heavy beamed ceiling, and an open fireplace 8 feet wide, built of brick, with the facings and a hearth laid with a large square green tile, giving to the room a Dutch effect and harmonizing with the other treatment. The large butler's pantry is well fitted up with drawers, closets, cupboards, bowl, etc. The kitchen is large and has a No. 13 Richardson & Boynton range set in white glazed brick, and on a vitrified tile hearth, N. P. canopy, and a heating closet, copper boiler, and a brass pipe. The sink is set in Tennessee marble drain slab. The laundry is fitted up complete with three part Alberene wash-tubs. The icebox-room is also built in. The second story is trimmed throughout with whitewood and is painted ivory-white. The main bedroom is finished in Delft blue. The second floor contains five bedrooms, eleven closets, and two bathrooms; the latter being wainscoted and furnished with Mott's fixtures and exposed nickelplated plumbing. The third floor contains a large billiard-room fitted up complete, and one bedroom, besides ample storage. The cellar is cemented with Peninsula cement, and the ceiling is plastered, the top of the wall is beamed, filled, and the entire outside walls of the house and the second story floor over the piazza are filled with mineral wool. The house has double floors throughout; the finished floor is of 2 inch maple, with oak borders 2 feet wide. The house is heated by a Thatcher combination hot-air and steam heater; hardware furnished by the Russell & Erwin Co., New York; mantels by A. S. Nichols, New York; decorations by George E. Walter, Bath Beach, New York, and electric-gas fixtures made from special designs by the architect. The art glass was furnished by Summers & Lamb from special designs. Cost, \$7,600, complete. Edward G. Vail, Jr., contractor, and Mr. C. Schubert, architect, both of Bath Beach, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE ON COMMONWEALTH AVENUE, BOSTON, MASS.

A RESIDENCE of Dutch Colonial treatment, which has recently been erected for Nathaniel Bradlee Doggett, Esq., on Commonwealth Avenue, Boston, Mass., is illustrated on pages 3, 8, and 9. The underpinning is of stone, and the whole of the superstructure is built of hard burned water-struck bricks laid with a Flemish bond and with dark headers. The roof is broken by dormer windows and a balustrade, the roof proper being covered with blue slate. All exterior woodwork is painted white. Dimensions: Front, 50 ft. 4 in.; side, 59 ft. 4 in., not including porch. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The interior is planned in the old Colonial style, with a central hall extending through the entire depth of the house, and with rooms on each side of it. The interior trim throughout is of white pine, and treated with china-white paint. The vestibule at the front entrance has an oak floor and paneled wainscoting. On each side of the vestibule are nooks provided with paneled seats. The main hall is broad and spacious, and has a paneled wainscoting and an ornamental staircase, with treads, risers, and balusters treated with white paint, while the handrail is of mahogany and finished in its natural state. The stairway is provided with a broad landing with a paneled seat and cluster of ornamental windows. The parlor and sitting-room are separated from the hall by double sliding doors, and both have open fireplaces furnished with Dutch tile hearths and facings and Colonial mantels. The library is a quaint and attractive apartment, and the particular characteristic of this room is the antique mantel, page 3, which was removed from the Doggett homestead, at the corner of Hollis and Tremont streets, in Boston, Mass., and which was built in 1771 by Nathaniel Bradlee, the grandfather of the present owner of this house. The interesting feature of this old Colonial mantel is, that the house in which it stood for so many years was the scene of the "Boston Tea Party," for it was in this house that the men occupants and

the townsmen gathered themselves and, disguised as Mohawk Indians, joined in the celebrated "Tea Party," which is one of the picturesque events of the Revolutionary War. The dining-room is an attractive room, the entrance to which is by the way of an alcove containing the buffet, and from which the main part of the room is reached. The bay window at the opposite end of the room, with its cluster of windows, is unique in design. The butler's pantry is provided with drawers, dressers, and cupboards, complete. The kitchen is of good dimensions, and is provided with a large well-fitted pantry, pot-closet, sink, range, and a rear entry which is large enough to admit ice-box. The woodwork in the kitchen and its dependencies is finished natural. The second floor is treated with ivory-white, and contains five unusually large bedrooms, eight closets, linen-closet, and two bathrooms; the latter are wainscoted and are furnished with the usual porcelain fixtures and exposed nickelplated plumbing. The third floor contains the servants' quarters and ample store room. There is a cellar under the entire house containing a cemented bottom, and a laundry, furnace, coal-bins, etc. The various contractors were as follows: General work, Horatio N. Mabie, Somerville, Mass.; plumbing, Dean Bros., Dorchester, Mass.; heating, Demarest Heating Co., Boston, Mass.; electricians, F. Bryant & Co., Cambridge, Mass. Mr. Edwin J. Lewis, Jr., architect, 9 Park street, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A MODERN RESIDENCE AT OGONTZ, PA.

THE modern residence presented on page 7 has recently been erected for Mr. William T. B. Roberts, at Ogontz, Pa. The first story and underpinning are constructed with rock-faced blue granite. The second story has a wooden framework, and it is covered with matched sheathing, metal lath, and then coated with cement plaster. This plaster is tinted with water paint of a Colonial yellow color. The roof is covered with shingles and painted a brilliant red. Dimensions: Front, 30 ft.; side, 40 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 9 ft.; third, 8 ft. The entrance is into an attractive hall, which is trimmed with chestnut and contains an ornamental stairway, with newel-posts and balusters turned out of oak. The parlor, dining-room, and den are also trimmed with chestnut. The dining-room contains an open fireplace with tiled hearth and facings and an oaken mantel, and a plate rack extending around the room. The den, which is separated from the dining-room by an archway with column effect, is two steps below the level of the dining-room floor, and is provided with a paneled seat. The butler's pantry is trimmed with white pine, and is furnished with drawers, dressers, cupboards, etc. The kitchen is also trimmed with white pine, and contains a Spear range, a laundry, servants' closet, store closet, dresser, sink, etc. The second story contains four bedrooms, four closets, and bathroom. The bedrooms are trimmed with white pine. The bathroom is also trimmed with white pine, and is wainscoted and furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains one bedroom and ample storage. A cemented cellar contains a Spear furnace, coal-bins, and cold storage. Mr. Albert Ellis Yarnall, architect, 14 South Broad street, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A DWELLING AT NEWARK, N. J.

A DWELLING recently completed for J. T. Honnes, Esq., at Forest Hill, Newark, N. J., is illustrated on page 10. The underpinning is built of red brick laid in red mortar. The exterior framework is covered with sheathing and paper. The first story is covered with clapboards and painted an olive-gray with cream-white trimmings; the second story is covered with shingles and stained a rich brown color. The roof is covered with shingles and stained red. Dimensions: Front, 37 ft.; side, 27 ft. 6 in. Height of ceilings: Cellar, 7 ft.; first story, 9 ft. 6 in.; second, 9 ft.; third, 8 ft. 6 in. The entrance is through a vestibule of unusually large proportions. The house is planned with a central hall, which contains an ornamental staircase with newel-posts, balusters, and rail. This hall, and the remainder of house, is trimmed with whitewood and is finished natural. The parlor is connected with the dining-room by double sliding doors, and has an attractive bay window thrown out at side, with a cluster of small windows. The library, on the opposite side of the hall contains a bay window with paneled seat, a beamed ceiling, bookcases built in, and open fireplace trimmed with Roman brick facings and hearth, and a mantel of excellent design of oak, and columns, etc. The dining-room is well lighted and ventilated, and contains a large butler's pantry provided with dresser, cupboard, and drawers. The kitchen and pantries are fitted up with all the best modern conveniences, including a "Provident" range.

The second floor is trimmed with pine and painted white, and it contains a large open hall, four bedrooms, eight closets, and bathroom, the latter being wainscoted and furnished with a "Standard Mfg. Co." porcelain-lined bath tub, "Trenton" ware wash bowl, and other necessary fixtures, with exposed nickelplated plumbing. The third floor contains two bedrooms and trunk-room. A cemented cellar contains a Richardson & Morgan "cyclone" boiler, laundry with "Alberene" stone wash trays. Cost, \$3,879, complete. Messrs. Hurd & Sutton, architects, Prudential Building, Newark, N. J. The contractors were as follows: Thomas Reynolds, mason; J. C. Orben, carpenter; Berla Bros., plumbing; J. W. Hallas, painting; J. W. Fitts, heating; all of Newark, N. J.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A PAIR OF HOUSES AT GLENSIDE, PA.

THE pair of houses illustrated on page 11 have recently been completed for William T. B. Roberts, Esq., at Glenside, Pa. The underpinning is built of rock-faced stone laid up in a rough manner. The superstructure is of wood, and the exterior framework is covered with sheathing and a good quality of building paper. The first story, up to the second story windows, is covered with shingles dipped and brushed with a dark brown shingle-stain of Cabot's make. The second story is lathed and coated with a cement plaster. The plaster work throughout is painted with water paint a Colonial yellow. The trimmings are painted white. The roof is covered with shingles and painted red. Dimensions: Front, including both houses, 60 ft. 8 in.; side, 29 ft. 8 in., exclusive of porches. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft.; third, 8 ft. Both houses being alike in plan and treatment, a description of one only is given. The entrance is into a vestibule which is trimmed with chestnut and wainscoted. The reception-hall is trimmed with chestnut, and contains a paneled wainscoting, a nook with a paneled seat, over which there is a cluster of case-ment windows, and an ornamental staircase with turned newel-posts, balusters, and rail of chestnut. The walls are treated artistically with green. The parlor is trimmed with chestnut, and the walls are paneled in green and white in an artistic manner. The dining-room is also trimmed with chestnut, and the walls are treated with a deep, dull red. This room is provided with an ornamental china cabinet and a chimney breast fitted with a mantel of chestnut of Colonial design. The kitchen is provided with a Novelty range made by Abram Cox Stone Co., of Philadelphia, an Alberene sink, dressers, and a servants' closet reached from the rear porch. The second floor is trimmed with chestnut, and contains three bedrooms, four closets, and a bathroom furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor is trimmed with chestnut, and contains two bedrooms and ample trunk-room. A cellar under the entire house, furnished with a cemented bottom, contains a laundry and a furnace. The cost of each house is \$4,200, including the land. Mr. Albert Ellis Yarnall and Mr. E. A. Wilson, associate, of 14 South Broad street, Philadelphia, Pa., were the architects.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A SEVEN HUNDRED AND FIFTY DOLLAR SUMMER COTTAGE AT MONROE PARK, SOUTH HAVEN, MO.

THE seven hundred and fifty dollar cottage illustrated on page 13 was recently completed for Mrs. M. P. Morrell, at Monroe Park, South Haven, Mo. The building is erected on a foundation of brick piers with stone footings. The exterior framework is covered with sheathing and then shingled from the grade line to the peak. The shingles on the first and second stories are stained with a mahogany shingle-stain of Cabot's make. The roof is stained a soft green. The sash and trimmings are painted white. Dimensions: Front, 23 ft. 6 in.; side, 20 ft. 6 in., not including porch. Height of ceilings: first story, 9 ft.; second, 8 ft. The plan shows a dining and a living-room extending across the front of the building. The walls of these rooms are plastered, and they have wainscoting three feet in height of yellow pine. The walls in living-room above this wainscoting are covered with dark green burlap, above which is a plate rack. The ceiling above is tinted in harmony. The fireplace is built of a cream pressed brick, with the facings and a hearth of the same. The dining-room has a similar wainscoting, tinted ceiling, and plate rack, but the wall space is covered with an old rose burlap. The walls throughout the remainder of the house have dressed and exposed studding and floor joists. The kitchen is sheathed up on the interior, and it contains a sink, and a closet on the porch; this is the only plumbing in the building, and it is provided with a cold water supply. The one bedroom on the first floor and the two bedrooms on the second story are well supplied

with good-sized closets. Mr. A. M. Worthington, architect, South Haven, Mich.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A COLONIAL RESIDENCE AT WATERBURY, CONN.

A RESIDENCE of Colonial treatment which has recently been erected for Dr. C. H. Brown, at Columbia Boulevard, Waterbury, Conn., is illustrated on pages 14 and 15. The terrace, with the classic balustrade, which rises to the front porch with Ionic columns, is the most attractive feature of the exterior. The style used is that of the American Colonial period. The situation of the house on a lot well above the level of the sidewalk in front suggested a special treatment of the front approaches, with a view to reduce in effect the considerable height from sidewalk to first floor level. This has been accomplished by an arrangement of terraces and steps such that, although the first floor level is 12 ft. 6 in. above the sidewalk, the effect of the house is not that of a house standing especially high. The underpinning is built of rock-faced granite. The sides of the house above this underpinning are covered with beaded clapboards, painted a delicate greenish drab color, while the trimmings are painted ivory-white. The roof is shingled and stained a moss-green with Dexter Bros. shingle-stain. Dimensions: Front, 48 ft.; side, 53 ft., not including veranda or terrace. Height of ceilings: Cellar, 7 ft. 6 in.; first story, 10 ft.; second, 9 ft.; third, 8 ft. 6 in. The plan of the house shows a large central hall, which is the principal feature of the interior, and which is 14 ft. wide and 31 ft. in length. This hall is treated with white enamel trim. It has a paneled wainscoting, wooden cornice, mahogany doors, and a paneled seat. The fireplace is built of Roman brick, gold in color, with the hearth and the facings laid with the same, and a carved mantel of mahogany with columns and mirror. The staircase is a handsome one with white enamel balusters and risers, and mahogany newel, treads, and rail. The parlor extends the entire depth of the main house, and is well lighted by four large windows. It is trimmed with white pine, and is treated with white enamel. The doors are of solid mahogany. The fireplace is built of brick, and the hearth and facings are laid with tiles. The mantel is of mahogany and is of a handsome design, is carved, and provided with a mirror and columns. The drawing-room, of good dimensions, is trimmed and finished the same as the parlor. The butler's pantry is trimmed with N. C. pine and is provided with a butler's bowl, dressers, drawers, and cupboards. The kitchen is provided with a large store pantry, well-fitted up refrigerator room, with outside entrance thereto, pot-closet, Richmond range, and a large laundry with laundry tubs and range, complete. The second floor is trimmed with white pine, the trim is treated with white enamel, and the doors are stained and finished in mahogany. This floor contains a large open hall which is used as a sitting-room, four bedrooms, one dressing-room, closets, and two bathrooms. The bathrooms are furnished with porcelain-lined tubs of the Standard make, and J. L. Mott's lavatories and closets, and are set up with nickelplated exposed plumbing. The third floor contains ample storage room and servants' quarters. A cellar has a bottom covered with Hoffman's Rosendale cement, and coated with Alpha Portland cement. This cellar contains a Thatcher furnace and coal-bins. Cost, \$12,000, complete. Mr. Wilfred E. Griggs, architect, 140 Grand street, Waterbury, Conn., and 171 Broadway, New York. The contractors were: Carpenters, the Tracy Bros. Co.; masons, the G. S. Chatfield Co.; painting, A. F. Taylor; plumbing, the Barlow Bros. Co.; heating, G. W. Minor; mantels, Charles Jackson & Son, all of Waterbury, Conn.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A LONDON dealer in art furnishings has prepared some specimen rooms in his establishment. In the bedroom the paneling and furniture are of dark oak relieved by ornamental fittings of hammered iron. Around the walls runs a high dado of matting tinted in monotone and surmounted by a broad band harmoniously worked in a Cymric design in stencil, the same theme being repeated in the richly stained leaded glass of the windows. A new feature is the introduction of pewter, which is used for the top of the washstand. A bathroom has white paneling and cool, sea-green tiles; the electric light fittings, of hammered pewter, are of aquatic designs, with shades formed of semi-transparent shells, and the windows have waves and ships in leaded panes.

THE prevailing fashion for white ceilings may be attributed to the result of a superstition that they look higher from being white, remarks a contemporary; but all colors are relative, and a light-tinted ceiling entering into the general scheme of color looks far more comfortable than the unsympathetic white.

Talks with Architects.

No. 12.—MR. THOMAS HASTINGS MAKES SOME SUGGESTIONS FOR NEW YORK.

FEW architects of New York have done more to beautify and ornament their native city than has Mr. Thomas Hastings, of the firm of Carrère & Hastings. Bringing to his work a designing skill of a very high order, a man who ranks both as a scholar and an artist—he has been fortunate in gaining many noble opportunities for the erection of buildings both great and small that have given him a leading rank not only among the men of his day, but a rank that must stand with the foremost of American architects of all time.

It is one thing to agitate for better art in our great cities; it is much more important to create it and to be able to follow out some of one's own ideals in actual construction. It is, unfortunately, not always the lot of the architect to be able to do what he would like to do or what seems to him best and most suited to municipal adornment. Doubtless Mr. Hastings' opportunities have not always been as broad as his conceptions would lead him; he has not, for example, been able to redesign any considerable portion of the metropolis nor execute any of those great schemes of general embellishment that must frequently be developed by artistic temperaments of a high order. But he has certainly been fortunate in giving to his buildings an unusual charm and grace, a personal feeling and special identity that has not only set them apart among the other buildings of the city, but has made them real contributions to municipal art by their own individual beauty. This in itself is an accomplishment of a very high degree, and it is work that, even if widely distributed throughout the city, helps and ennobles very many persons by the beautiful buildings set up for the admiration of all beholders.

Municipal art seems, indeed, best likely to succeed and progress through the individual work of individual architects; here at least is opportunity for actual realization, and Mr. Hastings' work—or that of his firm, for the buildings designed by Carrère & Hastings are the joint work of two highly trained and accomplished architects—is fine evidence of what individuals, either as clients or as architects, can accomplish.

The most conspicuous work yet undertaken by these architects is the new building for the New York Public Library which is now in process of erection in Bryant Park, facing Fifth avenue. It is likely to be, for many years to come, the most conspicuous and the most notable public building in New York. It will, therefore, be a notable contribution to civic art, and must, by illustration and example, have a helpful effect on the designing of any future great building by the municipality.

Like many earnest workers, Mr. Hastings is full of ideas for the general betterment of his city. I asked him if he would not outline some general thoughts for the BUILDING MONTHLY.

"It is a singular thing," he replied to my question, "that when a public building is proposed in America the first step is to look for some public park or open space on which it may be erected. This was what was done when the Post-Office was built by the government at the lower apex of City Hall Park, where a valuable and much needed open space was given up to a vast government building. The conditions in Bryant Park, where the new library is building, were somewhat different, for the space the library will occupy was filled with the reservoir, itself a great structure. The Library will, indeed, be in a park, but it will not occupy land used for park purposes.

"The American system is wholly and completely different from the European or Continental. Paris has taught us many lessons in architecture, although we do not always take them to heart; one at least she has shown us we have not learned, and that is, when a great public building is projected, to go to the slums, open new streets, tear down rookeries and unsightly buildings and create a new spot of beauty where before there had been only horror and decay. The Pantheon was erected on such a site and new avenues opened to it, thoroughly redeeming a hitherto neglected part of Paris. When the Opera was built new streets were cut through property burdened with similar buildings, and a new quarter opened up to civilization.

"The Parisians seem to understand the value of the artistic design of cities as it is not understood or known in this country. They value not one building alone, but consider it in relation to all the surrounding buildings. It is not sufficient to a French architect to think of his building in itself, but he views its relationship to other buildings, he considers its surroundings, the streets that lead to it, their design and dimensions and relationship to other streets and buildings. Modern Paris is the wonderfully artistic and beautiful city it is to-day not because of the merit of its great buildings alone, but because these great buildings bear a definite relationship to each other, and because they have, to a very great extent, been considered in relation to the city as a whole.

"And this is not a forgotten art in Paris, but is as keenly practised and as much thought of to-day as when some of the older buildings—which we now think as always having occupied their present positions—were erected. Only last year a magnificent scheme was worked out in relation to the bridge Alexandre III. This bridge was erected on an axis that ended in the dome of the Invalides, which closed the vista on one end of a superb avenue. On the other side of the Seine, and leading directly to the bridge, was another stately avenue connected with the Champs Elysées, on either side of which were the two great palaces of the Exposition. The whole scheme was, in a sense, designed to give place to these two buildings, yet the new streets and the new bridge were planned and designed with immediate reference to the far distant Invalides with its great dome.

"We have nothing like this in New York, and no municipal improvement has yet been started on similar lines. The time is not far distant when New York may undertake to erect a new City Hall. It already needs a post-office up-town, and the courts would naturally follow. It will, therefore, soon be a problem to arrange and place these buildings so they will form an effective group, be convenient and accessible and help the city by supplanting some present ugly spot. As an example of what may be done—and I cite this instance as an example only, as an illustration of a method we have not yet tried—let us assume that the new City Hall is proposed for the foot of Forty-first street and the East River."

"But is not that somewhat out of the way?" I asked.

"Not at all. Forty-second street is now the railroad center of the city, and is as accessible a street as any in the city. Much of the greater city is now spread over Long Island, and a site on the East River is more nearly central, even with the present lines of communication, than one further inland.

"But this is what I have to propose. Let us assume such a site for the City Hall. Forty-first street forms the line of communication between it and the Public Library, one of the largest public buildings in the city. Suppose a hundred feet on each side of Forty-first street is condemned and a new avenue or boulevard created, with a sunken garden and trees in the center; the cost of this improvement would be almost immediately met by assessments on the remaining property on Forty-second and Fortieth streets. Then, at the foot of the street, which is now occupied by most unsightly buildings, the City Hall could be built. On one side could be placed the post-office, which would be on a line with the Grand Central Station, and on the other the Court House, two fine sites being obtained on the new street on land now of small value, wiping out tenements and creating a wholly new neighborhood which would speedily become the most important in the city.

"However, do not imagine I am particularly arguing for this scheme; I am simply suggesting it as a way of accomplishing city improvements in a rational way, with small cost but with great results. The slums are not to be improved by new tenement buildings, but by wholly changing the character of the structures put upon them. The cost of such improvements is vastly less than when high-priced land is chosen, and the whole city is bettered by the wiping out of foul spots."

BARR FERREE.

WALL PAPER FOR THE NURSERY.

THE wall space from ceiling to floor should be kept entirely free from other subjects, says a recent writer, and occupied solely by a simple series of pictures surrounded by a perfectly plain paper. By this means attention is concentrated on the individual designs instead of being confused by intricate and distracting patterns spreading over all the rest of the wall, as is far too often the case. This new treatment has also the advantage of considerably curtailing expense.

Pictures illustrating nursery rhymes, domestic, farmyard and other animals, are the subjects of a new series of wall papers especially designed for the nursery, and the treatment is strikingly bold, yet simple. The panels are so designed that they can be repeated all around the room, if desired, producing a fascinating frieze of puppies in varied attitudes, hen and chickens, mother duck and her brood, or others. Noah's ark is especially delightful. It consists of seven panels, in five-foot lengths, and the animals go around the room in solemn procession of twos.

This idea is a great improvement upon the earlier nursery wall-paper, with its jumble of many stories pictured almost without separation, so that they present no clear suggestion to the child's mind.

A STENCIL, to work effectively, says the Canadian Architect, must be kept in such condition as to be soft and pliable, so that when you come on to it with your brush or roller it gives under the pressure, let that pressure be ever so light, clings close to the wall and allows no color to run in under the edges.

Legal Decisions

CERTIFICATE OF ARCHITECT.—Though a building contract provides that payments shall be on the certificates of the architects "to estimates and valuations for materials furnished and work done," admission in evidence of a certificate that plaintiffs, the contractors, "are entitled to payment" of a certain sum "for material furnished and work done," is not error, other evidence and instructions showing that the certificate was considered only *prima facie* evidence, and that defendants might have damages for delay in completion. *Bailey, Milliken & Bland, Limited, vs. Trustees of Presbyterian Board of Publication and Sabbath School Work*, 50 At. Rep. (Pa.) 160.

CHANGE IN MATERIALS.—A contract for the erection of an oil mill required its foundations to be laid in cement mortar, except machinery foundations, which were to be laid in Portland cement, and the walls were required to be laid in lime mortar, except certain capping, to be in Portland cement. Thereafter the specifications were changed, requiring Louisville cement to be used instead of Portland cement "in all brick work except machinery foundations and capping. *Held*, that such changes only applied in the character of cement to be used, and did not change the contract as to the quantity of brick required to be laid in cement. *Perkins Oil Co. vs. Eberhart et al.*, 64 S. W. Rep. (Tenn.) 760.

CHARGING OF PREMISES WITH LIEN BY TENANT.—A tenant can not, without the authority or consent of his landlord, charge the leased premises with a lien for material used in the construction of a building thereon. In the absence of evidence showing that such building was not permanently annexed to the soil, or that it was intended as a mere agricultural fixture, it can not be treated as the tenant's property, and subjected to a lien in favor of the person furnishing the materials used in its construction. *Stevens et al. vs. Burnham et al.*, 87 N. W. Rep. (Neb.) 546.

COMPENSATION FOR EXTRAS.—A contractor sued to recover the building price of a house both on the specific contract and a quantum meruit and to foreclose a mechanic's lien. His evidence showed the making of the contract, that \$250 of the price agreed on remained unpaid, that certain items of work claimed as extras were so, and the value of the other items admitted by defendant to be extras. *Held*, that it was error to dismiss the petition on the merits, as the evidence showed plaintiff was entitled to judgment in some amount. *Brewer vs. Hugg et al.*, 87 N. W. Rep. (Iowa) 409.

CONTRACT.—Where a property owner stated to a lumber company that he desired to purchase lumber for a house on certain premises, and the company agreed to sell such lumber when he should desire the same, to be paid for at market prices, made an estimate as to the probable cost of the lumber, and under this agreement delivered enough lumber to complete the lower floor, sills, and studding, three days before the owner of the property executed a mortgage thereon, there was an existing contract for the purchase of the lumber, establishing a mechanic's lien superior to the mortgage, under the statute providing that a mechanic's lien shall be superior to a mortgage when the contract under which the lien is claimed is entered into prior to the execution of the mortgage. *Taylor vs. Springfield Lumber Co. et al.*, 61 N. E. Rep. (Mass.) 217.

EFFECT OF ALTERATIONS ON MORTGAGE.—A mortgage given for a precedent debt on property on which alterations are being made, without notice thereof, is a mortgage in good faith, within such statute, so as to be entitled to priority over the mechanic's lien subsequently filed. *Reed vs. Rochford et al.*, 50 At. Rep. (N. J.) 70.

INDEMNITY TO SURETY ON BOND.—A surety for a contractor for government work, who took an indemnity agreement from the contractor and another, can not be prejudiced by any undisclosed relation between the signers of such agreement as that they were partners in the contract; and the fact that the surety had been reimbursed for a payment of one claim through the indemnity does not enlarge its liability to other creditors of the contractor, as to whom, in the marshaling of claims, the claim paid must be treated as though the surety had not been reimbursed. *American Surety Co. of New York vs. Lawrenceville Cement Co. et al.*, 110 Fed. Rep. (U. S.) 717.

THE VALUE OF DESIGN AND RETICENCE IN DECORATION.

THERE was no one in all the building trades with more power for making or marring a building than the decorator, pointed out Mr. Fletcher, headmaster of the Leicester School of Art in a recent address. His position was unique. It was his taste mainly which decided the treatment; the client, more often than not, being uncertain as to his own taste, referred the matter to the decorator, whose business it was to beautify. There were cases, of course, where the client in the matter of wall-papers would have the latest thing—the last and most blatant pattern that had come upon the market, and to this fashion even the arguments of good taste were of no avail. The fashionable thing, however, was rarely the most refined. Could not manufacturers keep from year to year the finest things, and have a separate garish lot for the fashionable person? It was in vain that they asked for a good pattern which was a year old. The value of design did not necessarily mean the value of ornament. Decorators should suggest to their clients the value of reticence, to enhance the effect of that ornament which was fit and fine. It was still difficult to surpass the restful dignity of rooms which were decorated before wall-papers were invented. A knowledge of design, as an education in taste, was of great value. This knowledge led to the value of pattern as a whole, and with it it was possible to transform a poorly-proportioned apartment into one of seemly shape, or by an emphasis of one part or another to draw attention from an ugly construction.

Where additions or alterations had been made to a building destroying its unity and breadth, the painter's sense of design might pull the whole together, and unite parts which were isolated. With reference to moldings the same might be said. If the section of a molding was properly designed it gave its own decoration by its light and shade. The effect of many a simple and dignified house or block of buildings was often completely ruined by picking out the various parts in different colors, when a reticent and broad treatment was best. When style was only unconsciously recognized the different building trades were not divorced from each other; each craft worked with the same aim in view.

Nowadays buildings were raised in a confusion of different styles, and if their decoration was not in keeping with them, confusion became chaos. Just as moldings might suggest the treatment, so also might the plan. The pictures and furniture might also suggest the scheme of the decoration. The value of simple elements in design was apt to be overlooked. At the present time the most successful work was based on the simplest lines and elements, the variation of one or two units being often the basis of an entirely satisfying and beautiful effect. By reason of the simplicity of the means employed, the work had an additional source of interest. Bound up with the question of simplicity of detail in the form and scheme of patterning was also the question of color. The one suggested the other. In the decoration of rooms and halls of assembly the color and the character of the design were mainly decided by the fact that the walls (which formed the main part of the surface to be treated) were to be a background for pictures of people, and just as for a background for good pictures they should not choose a strong and restless pattern, so, as a background for people, they avoided that which, like incandescent gas, showed them to disadvantage.

Considering people and pictures, and the diversity of party-colored objects behind which the decoration had to stand, they would agree, he thought, that it was safest and best to keep both color and pattern on simple lines. By the emphasis of these two points, design and reticence, it was not meant to imply that there was no place with which gorgeous color and elaborate pattern might be employed with fitness. But when it was employed it was of the first importance that it should be of the best—such work as Ghiberti or Morris might have done. It was a mistake to allow any one but a master to handle elaborate patterns. What he had mainly sought to bring before them was the importance of a reticent use of ornament—the value of simpler and better design, the broader treatment of painted surface, less picking out and, if possible, more original work fitted to the constantly differing requirements. It was in this, a better direction, that taste was trending, and they should be more than ready to lead it.

If the decorator's position was unique, his responsibilities were proportionately wide and deep. It was his part to crown and consummate the work of those who had labored before him. Not his employer alone, but all around were his clients; out of doors his fellow-townsmen were daily under the influence and it should be the inspiration of his work, and within the house the result of his taste should be the ally of rest and refreshment and of all the virtues which went to make it home.

New Books

PERIOD DECORATION. By Chandler R. Clifford. Illustrated with many original and facsimile prints of contemporary and historic interest. New York: Clifford & Lawton. 1901. Pp. 261.

This book has been prepared to give the decorator a convenient summary of the chief decorative styles, with concise information, both by means of text and illustrations of their leading characteristics. It begins with ancient Egypt and treats each of the chief phases of decorative art to our own time. Due attention is given to the historical conditions under which the various styles were developed, and the chapter on Oriental art includes an elaborate catalogue of Eastern rugs, with notes on their origin, styles, etc. Biographical notes of decorators and leading characters in later historical periods add to the value of the work as a book of reference.

The title is hardly a fortunate one, and scarcely suggests the subject-matter of the book. The theme has been treated before in expensive publications, of which the celebrated *Grammar of Owen Jones* is still the most valuable, and which is thoroughly available, notwithstanding its high price. The illustrations of the present book are not always well chosen nor are they reproduced with sufficient care. Modern rooms treated by modern designers in various historical styles are hardly sufficient illustrations for a guide to historic decoration such as this purports to be.

HOW TO FRAME A HOUSE; OR, HOUSE AND ROOF FRAMING. By Owen B. Maginnis. New York: Owen B. Maginnis. 1901. Pp. 96. Price, \$1.00.

The title-page of this book tells us, with engaging frankness, that it is "a valuable and indispensable book for carpenters, builders, foremen, journeymen, etc." It unquestionably contains a good deal of valuable information. It is divided into three parts treating respectively of balloon and braced framed houses, how to frame the timbers for a brick house, and roof framing. In addition to descriptions and methods for the ordinary dwelling-house, the book contains chapters on methods of construction, framed tenements and factories, how to construct a timber framed auditorium, the construction of reviewing stands, how to build a timber grain elevator, cheap timber bridges for roadways, and the framing of a log cabin. The text consists of very careful descriptions of methods, and the illustrations, which are chiefly diagrammatic in form, are very helpful and very completely illustrate the subjects they have been prepared to explain. It is an excellent text-book.

ROMANTIC CASTLES AND PALACES, AS SEEN AND DESCRIBED BY FAMOUS WRITERS. Edited and translated by Esther Singleton. New York: Dodd, Mead & Co. 1901. Pp. xiv, 395. Price, \$1.60, net.

Every book that helps to increase popular interest in the notable buildings of the world, or in any buildings, good or bad, is a help to that broadening interest in architecture and the fine arts that may come some day and which will add so much to the beauty of the world when once it is general. "Famous" authors are by no means always desirable guides to art and history, but they at least have the merit of writing intelligently and often with grace, and hence the bringing together of a group of descriptions of conspicuous buildings by well-known writers may well serve a useful purpose in directing attention to structures about which the public at large knows very little. It is for this end that the present book has been compiled, though it is curious to note that the editor, who has prepared other volumes of a similar nature, calls herself their "author" on her present title-page, though she did not originate a line of them save her prefaces.

The beautiful illustrations and the text by practised writers, as combined in this book, will command wide attention and give it a well deserved popularity. Several notable omissions are apparent. Thus the greatest palaces in the world, that at Versailles, the Vatican in Rome, and the Louvre in Paris, are not included, yet their romantic interest is of the greatest. The sketch of the "Ducal Palace"—a badly chosen title, by the way, since there are many ducal palaces, but only one palace known as the Doge's—by Theophile Gautier, is quite inadequate, and fails to give the reader as good a conception of that wonderful building as an ordinary guide-book. But if this volume does no more than direct the reader to more competent authorities, it will have served a useful purpose and accomplished all it was intended to accomplish.

Garden Notes

THE winter months are the season of repose in garden work. Nothing can be done out of doors; the greenhouse or conservatory is presumably in good working order; the vegetable hothouse and hotbeds alone call for constant care and attention. But the owner of a garden must do more than express satisfaction with the results obtained by his subordinates. It is, of course, a most delightful thing to have a beautiful garden, but even greater pleasure can be obtained from planning, arranging, and developing it oneself than simply looking at it when trained employees have brought it to perfection in the early spring and the full maturity of summer.

The creation of a garden does not mean the performing of the actual labor of raising plants and digging flower beds; but it does imply intelligent supervision on the part of the owner and a thorough knowledge of the results that will be obtained by following out any proposed system or plan. One should know how various foliage plants will group; how effective certain flowers will be in certain spots; one should realize how certain combinations will add to the effect of one part or how inefficient they may be in another. A garden is not simply a place in which to grow trees, shrubs, and flowers; but it is a place in which to acquire knowledge and put one's knowledge to practical tests. The very least that one can do is to learn the names of the trees and shrubs on his place or in its immediate neighborhood; and it is not much more to learn the names of the leading flowers, and but a step further to understand how and why they are most effective.

A very great literature has now grown up around the garden; not only has the cultivated garden been thoroughly studied, analyzed, and classified, but even the wild fields and the woods have now their handbooks, so that the names and habits of all common plants can be learned with the slightest exertion. It would seem as though the winter months might profitably be employed, in part at least, in acquiring thus useful knowledge which will be needed when the spring begins to open. It is true enough that it is more difficult to study plant life in winter, when the plants may be absent, than it is in summer, when one has but to put forth one's hand to gather the most varied blossoms. But the winter is the season for reading and study, and the plant books give so much information that a very good knowledge of plants, their ways, habits, characteristics, and decorative values, may be obtained from them in the dreariest of winter wastes.

The season of catalogues will open soon, and the ingenious plant grower will be upon us with his novelties. The plant catalogue is a most fascinating publication, and its suggestions are made with the deliberate purpose of extracting as many dollars from the pockets of its readers as a weak-minded man may be induced to surrender to his hobby. Novelties, as a rule, are good things to avoid. Many of them are, no doubt, of great interest, and, in time, may develop into standards of unimpaired excellence; but there are so many standard plants, so many old favorites, so many established flowers and shrubs, that one does not need to look up the latest fashions in horticulture to have a beautiful garden.

Plant catalogues, however, have their real value, and much can be learned from an intelligent study of them. The information they contain is not always well given, and one sometimes has to hunt through many pages for the kernels of solid worth; but as a whole they print much of interest, and an attentive comparison of a number of them will result in many valuable suggestions. The catalogue is a valuable book to every garden maker, and its advent toward the close of the winter will be welcomed by many admirers.

February is a good month in which to wash fruit trees—a process that is recommended as a means of destroying injurious vegetable growths and insect scales and eggs. The most successful material is a caustic or burning wash, known as caustic alkali wash. One pound of commercial caustic soda is dissolved in water, and another solution made of one pound of crude potash, also in water. The two solutions are mixed when well dissolved, and three quarters of a pound of agricultural treacle added. The mixture is stirred well, and enough water added to make ten gallons.

HARDWOOD FLOORS.

HARDWOOD floors are fast taking the place of carpets, because they offer the perfection of sanitary flooring, points out Katherine R. Byers, in the Boston Cooking School Magazine. The clean and polished surface affords no opportunity for disease germs or any sort of uncleanness to find a hiding-place. Rugs can be used, as they can be readily rolled, taken out of doors, and cleaned as often as necessary. The objection made to hardwood floors is that of expense. But, if the fact that they last a lifetime be taken into consideration, also that carpets must be frequently renewed, this objection is obviated.

As the floor is the foundation on which to bring out to the best advantage any scheme of decoration, it must harmonize with the furnishings of the room. For this reason it should be neutral in coloring.

The woods most commonly used, both alone and in combination, are white and red oak, sycamore, cherry, beech, birch, mahogany, chestnut, ash, walnut, maple, and rosewood. Often woods strongly contrasting in colors are used, and made into very elaborate designs. This kind of floor is not so much used now as the floor of one kind of wood.

The favorite wood is white oak, because of its color, hardness, stability, beauty, and abundance. The bark of the white oak is smoother than that of other species of oak, and is of light color. For this reason, rather than on account of the color of the wood, it is called white oak.

Oak is cut into boards in two different ways, known as "plain" and "quarter" sawing. In the first of these, the log is sawed through and through, successive boards being taken off until the log is exhausted. In the quarter sawing the log is cut into four pieces, the saw kerf being parallel with the medullary rays. These quarters are then cut into boards.

THE CHINA CLOSET.

PERHAPS the most important part of a dining-room is the china-closet, remarks the New York Tribune. On the arrangement of the dishes within it depends a great deal of the artistic effect that should give charm to the room.

The inner woodwork, excepting the shelves, should be tinted to match the wood finish of the dining-room and varnished. For covering the shelves butcher's linen is perhaps the best fabric, and should not extend more than a half inch below the edge of the shelf. A line of drawnwork or narrow scallops in buttonhole stitch may finish the edge. A soft pad should be put under the linen cover to lessen the danger of breaking from a slip or jar.

When the shelves are sufficiently far apart, it is well to put screw hooks into the under side, on which to hang cups, punch glasses and small cream pitchers. These should be placed with due regard to harmony of color and form. The saucers may be hung at the back in wire china racks or may stand in piles in the corners.

Heavy pieces of cut glass, such as punch bowls and salad bowls, should be put on the lowest shelf, for security. Lighter pieces may go on the top shelf. No matter how crowded the closet may be, nothing should ever be placed inside a piece of cut glass. If necessary to economize space, the better way is to put the small article first on the shelf and invert the larger over it. The upper piece must rest absolutely on its own margin, without pressure on any part of the lower dish. An occasional bit of colored glass gives a pretty variety to the arrangement.

In placing large platters narrow strips of wood should be tacked on the shelves, unless they have the proper safety grooves to keep them from slipping.

An interesting case, touching on the rights of a tenant to remove conservatories and greenhouses from leased property, was recently decided by an English judge. The question rested on the right of a tenant to remove glass houses erected by him for the purposes of his business without the written consent of the landlord. Several glass houses had been erected; in one the glass roof rested on concrete sides; in others on wooden piles on which sills had been placed which supported the glass roof. The roofs had been nailed to the sills, and the sills, in their turn, to the posts. The judge decided that if these buildings had been erected for mere purpose of pleasure and ornament, they could not be removed; but that having been erected for purposes of trade they could be removed. The decision has provoked some interest as illustrating the tendency, long since manifested in English law, to extend the rights of the tenants at the expense of the landlord.

A room which had no fireplace or mantel shelf was relieved, says a contributor to Keith's Magazine, of stiffness and a place furnished for bric-à-brac by placing a shelf carried on brackets, against the wall over a high-backed seat. A rug was laid before the seat on the floor, and thus a feature made of this piece of furniture, as well as partial substitute for a mantel.

Household Notes

Has it really come to this? Here is a furniture manufacturer commending his double-decker beds, which he says are not new but are used more now than formerly. The construction is very simple. The four corner posts are carried up to a sufficient height to support a second bed frame immediately over the first, and is then finished in the usual style with a brass knob or other ornament. It is some relief to know that these remarkable objects of furniture are chiefly used in newsboys' lodging houses and in cheap lodging houses in general, as well as on board ships and steamers; but, we are further informed, they are coming into use in small rooms in flats and even in private houses, where, for example, two servants can be comfortably bedded in the contrivance where there may not be room for two individual beds. Some of these things are finished in quite an expensive manner, and a double-decker bed may be something very different from the cheap affair it appears to be on first thought. There is, however, something appalling in the suggestion that city life is becoming so crowded and condensed that people will soon find double-decker beds a useful and even necessary article of furniture.

And now comes the combination room, with all living conveniences compressed within the smallest space. It is the creation of an architect, and the description involves a host of wonders. It was a room about twenty feet long and ten wide, with a large window at one end and a small door at the other. It was carpeted and contained one chair, and there was a two-light chandelier about the center of the ceiling. The room was papered on one wall and at the ends, but the opposite side wall was apparently wainscoted. It looked like a sitting-room for one. An opening of the wainscoting revealed a closet big enough to accommodate all the clothes an ordinary person would care to have. Below it was a drawer for shoes.

A bed, similar to the sleeping-car variety, was then turned down; adjoining it was a chiffonier with half a dozen drawers in it and a glass at the top, the glass being concealed by a lid which dropped down, making a shelf for toilet articles. Beyond was a washstand opening in the same way, with water tank, bowl, slop jar and all. In another place was a door that fell down, making a small table, and revealing a cupboard where dishes and food might be kept; in still another, a similar lid dropping made a writing-table and revealed space and shelving for a good-sized library, with a nook for ink, pens, and such things. A half dozen leather-covered seats were hidden in the same way ready to be pulled down for use, and behind each of them was shelving, the depth of the wainscoting being about two feet. Above the bed and elsewhere about the wainscoting were drawers and shelves, room for a trunk, and little cubby holes for storing things. Inside of the high closet for clothes was a mirror two feet by six feet in size.

Too much furniture in a room is worse than too little. If the furniture is scamp, one can at least move around in the room; if it is crowded, many perilous journeys must be made between the chairs, tables, and cabinets. A crowded room involves discomforts without end. A room, presumably, is intended to be used by human beings, and not as a place for the storage of furniture. The more furniture there is, the less space is left for humanity. Moreover, crowded rooms entail a great deal of labor in their care. Everyone likes to have plenty of room, and that can not be had where the furniture fills the most space. It is often more difficult to furnish a room simply than to crowd it with articles of use and ornament. In a simply furnished room every object counts in the result. So it follows that simplicity in furnishings is an incentive to good furniture. One can hardly help noticing every point of, let us say, three chairs in a room, whereas if there were six or seven it would be possible to carry away only a general idea of a confused mass. Ugly chairs and all sorts of abominations can slip into a crowded room, while they would be the first things to be banished if they could be seen in their entirety.

A grease can is an indispensable adjunct to the well ordered kitchen. Every particle of grease should be thrown into it, including the scrapings from the dishes and plates. The drain pipe of the kitchen sink is one of the most difficult things to keep clean, and nothing is so apt to clog it as grease and the refuse that even careful servants throw into it. The grease can, a recognized receptacle for greasy fragments, is an important aid in keeping the sink clean.

New Building Patents

THE following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY, by MUNN & Co., Solicitors of American and Foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

PRODUCTION OF ARTIFICIAL STONE FROM LIMESTONE. T. M. Thom, Wood Green, England. November 19	687,079	687,080
COMBINED BRICK AND TILE FURRING OR FACING. D. W. Anderson, Richmond, Va. November 19	687,103	
BRICK OR COMBINED BRICK AND TILE. D. W. Anderson, Richmond, Va. November 19	687,104	
BRICK FOR MAKING STRUCTURES FIREPROOF. D. W. Anderson, Richmond, Va. November 19	687,105	

CARPENTRY.

WEATHER STRIP. G. W. Golden, Detroit, Mich. November 5	686,051	
COMBINED DOOR CLOSURE AND SCREEN. Lizzie C. Herd- rich, Indianapolis, Ind. November 12	686,297	
SELF-CLOSING WINDOW. Van Noorden & Smith, Boston, Mass. November 19	686,869	
WINDOW CORNER POST. J. W. Coulson, Columbus, Ohio. November 19	687,003	
CORNER POST AND JOINT. J. E. and C. B. Brown, Brad- ford, Pa. November 19	687,114	
LOUVER WINDOW. J. W. Walker, Malden, Mass. No- vember 26	687,705	

CONSTRUCTION.

LADDER BRACKET FOR SCAFFOLDING. M. C. A. Heiden, Mulheim-on-the-Ruhr, Germany. November 5	685,984	
COVERING FOR ROOFS. W. H. Bache, Boundbrook, N. J. November 5	686,191	
SANITARY CLOSET OR SAFE. E. E. Ashley, New York, N. Y. November 19	686,697	
LINTEL. W. F. Pelton, New York, N. Y. November 19	687,059	
SHINGLING BRACKET. F. L. Spring, Townsend, Mass. November 26	687,666	

FIREPROOFING, FIRE-EXTINGUISHMENT.

AUTOMATIC FIRE ALARM. B. A. Crisman, St. Elmo, Tenn. November 5	685,745	
FIREPROOF BLIND OR DOOR. W. R. and R. H. Kinnear, Columbus, Ohio. November 19	687,035	
FIRE ESCAPE. Hattie L. Wright, Pittsburg, Pa. No- vember 5	686,182	
FIRE EXTINGUISHER. A. C. Badger, Boston, Mass. No- vember 19	686,931	

ELEVATORS.

AUTOMATIC CATCH FOR ELEVATOR HATCHES. F. F. Martin, Cleveland, Ohio. November 12	686,316	
ELEVATOR-DOOR-LOCKING MECHANISM. J. S. Muckle, Philadelphia, Pa. November 19	687,049	
SAFETY DEVICE FOR ELEVATORS. U. S. Alz, Garden- ville, Md. November 26	687,187	
LOCKING DEVICE FOR ELEVATORS. R. W. Hare, Pitts- burg, Pa. November 26	687,306	

HARDWARE.

WINDOW STRIP FASTENER. Mary H. Read, Clearfield, Pa. November 5	685,794	
OUTSIDE WINDOW FASTENER. A. M. Taylor and F. F. Fogg, Hampden, Me. November 5	685,801	
DOOR CHECK. Voight & Hurd, New Britain, Conn. No- vember 5	685,804	
SASH HOLDER AND FASTENER. O. Williams, St. Johns- ville, N. Y. November 5	685,809	
DOOR LOCK AND ALARM. A. L. Shore, Minneapolis, Minn. November 5	685,877	
DOOR HINGE. J. M. Cannon, Bowen, Ill. November 5	686,025	
DOOR CHECK AND CLOSER. W. K. Henry, New Britain, Conn. November 5	686,065	
DOOR-CLOSING DEVICE. M. H. Hines, Brooklyn, N. Y. November 5	686,069	
COMBINED DOOR CHECK AND CLOSER. W. H. Taylor, Stamford, Conn. November 5	686,167	
SASH FASTENER. E. Schindler, Easton, Pa. November 12	686,345	
SASH CORD GUIDE. R. M. Elliott, Homestead, Pa. No- vember 12	686,513	
ALARM DOOR KNOB. F. J. Gustine, New Orleans, La. November 12	686,652	
SASH FASTENER. W. S. James, Ft. Worth, Tex. No- vember 12	686,673	
SASH LOCK. W. F. Flister, Hamburg, Pa. November 19	687,006	
FLUSH BOLT. H. G. Karrenberg, New York, N. Y. November 19	687,032	
WINDOW FASTENER. J. J. McCormick, San Francisco, Cal. November 19	687,052	
LOCK. Henry Barry, San Francisco, Cal. November 19	687,175	
SASH LOCK. E. Miller, Chicago, Ill. November 26	687,327	
HINGE. B. B. Trundy, Dedham, Mass. November 26	687,349	
PROTECTIVE DEVICE FOR WINDOWS. W. H. C. Mat- thews, New York, N. Y. November 26	687,484	

HEATING AND VENTILATION.

HEATER. J. Kasmeler, Florence, Ala. November 5	685,848	
VENTILATOR CAP. J. Keane, San Francisco, Cal. No- vember 5	685,849	
RADIATOR. G. M. Aylsworth, Collingwood, Canada. November 5	686,190	
FIREPLACE DAMPER. R. Jahn, Scotchplains, N. J. No- vember 12	686,615	
STEAM HEATING SYSTEM. J. A. Trane, La Crosse, Wis. November 12	686,666	
WINDOW SASH VENTILATOR. S. W. Sherman, Toledo, Ohio. November 12	35,286	
HEATING FURNACE. D. S. Richardson, New York, N. Y. November 19	686,907	
HEATING APPARATUS. D. L. Dwinell, Montreal, Can- ada. November 26	687,300	

MISCELLANEOUS.

NON-CONDUCTING COVERING. R. H. Martin, New York, N. Y. November 5	685,780	
BURGLAR ALARM. R. Lehman, New York, N. Y. No- vember 5	686,093	
PLATFORM FOR PAINTERS. C. S. and F. O. Sprague, Northstar, Mich. November 5	686,159	

PLUMBING.

FLUSHING VALVE. Meyer & Horst, Louisville, Ky. November 5	686,165	
FAUCET. J. A. Wight, Chicago, Ill. November 12	686,566	
WATER-CLOSET TANK. J. J. G. Crosby, Northville, Mich. November 12	686,592	
FLUSHING MECHANISM FOR CLOSETS, ETC. J. Douglas, Norwood, Ohio. November 19	686,890	

TOOLS.

SCREW DRIVER. G. T. Bailey, Pleasanthill, Mo. No- vember 5	686,192	
CARPENTERS' SQUARE. D. B. Whitehall, North Claren- don, Pa. November 5	686,240	
SCREW DRIVER. C. M. Morse, Portland, Me. Novem- ber 26	687,401	

Publishers' Department

DECORATORS' SUPPLIES.

THE absence of ornament has been in the past a striking feature of nearly all inexpensive buildings. This is being rapidly changed by the introduction of new designs and details of ornamentation, so that cheap structures now present an improved and artistic appearance. The art of imitating the old materials in forms and colors has produced this result. The method of making more imposing and beautiful the exteriors and interiors of the lowest priced buildings may now



A CHEAP IONIC CAPITAL.

be used by all architects who have to keep within economic prices. Ornaments most in use are capitals and brackets. An idea of the growth of this business is shown in the output of the Decorators' Supply Com- pany, of 209-219 South Clinton Street, Chicago, which has increased fivefold in two years. Their catalogue for 1901, on caps and brackets, will fairly illustrate why the sale of these products develops so fast.

INTERNATIONAL CORRESPONDENCE SCHOOLS.

THE Franklin Institute, the oldest and most con- servative and influential scientific body in this coun- try, on behalf of the Philadelphia Export Exposition, recently bestowed the highest award, a diploma and silver medal, to the International Correspondence Schools, of Scranton, Pa., for a unique, thorough, and comprehensive system of technical education by cor- respondence. Notice substantial as this from a great society is a decided recognition of the fact that in- dustrial science can be successfully taught by mail. The Scranton Institute, started October 16, 1891, celebrated its tenth anniversary on that date. One of the greatest educational triumphs of the century began its career with eight or nine performers of a work that now requires a corps of twenty-five hundred, and at the present time nearly three hundred and fifty thousand students are enrolled in the schools. The first student at the time of his enrolment was an or- dinary coal miner. He was soon enabled by his course of study to secure the position of mine superintendent. Thousands of students are now filling important places in every line of industry in all quarters of the world. This result was reached by perseverance in studies bringing improvement and advancement in technical knowledge. Others not so far advanced were placed in lucrative callings through the agency of the schools.

At the start the magnitude of the present success was not even guessed. It was recognized that there was a good field for an enterprise on the lines adopted by President Foster, but it was such an entirely new plan that, like many great innovations or inventions, it was at first coldly entertained, and even resisted by men of high educational and practical experience. Then very rapidly the work of the schools was brought clearly into prominence, as shown by the advancement of the students. All doubt as to the ability to develop practical results by this system has now disappeared, and many strenuous opposers have become either stu- dents or zealous defenders of the schools. Soon after the organization of the School of Mines, there was a demand for technical education in other directions, notably in mechanics, and courses were arranged by skilled engineers and placed before the public, and from these the curriculum has now reached nearly a hundred, with others in preparation. In this advance of the schools able business management has been the leading force. It has persisted in instruction that

makes architects of carpenters, mechanical engineers of machinists, civil engineers of surveyors, electrical engineers of electrical workers, steam engineers of firemen and laborers, and prospects for thousands through their studies. This instruction comes from specially prepared text-books; those of schools and colleges being inadequate in education by mail. Many years and several hundred thousand dollars have been given to the labor of making these text-books thor- oughly comprehensive and practical. In no institution can more care be taken with a pupil or more rigid ex- amination be given each lesson. Besides this educa- tional growth of ten years, the schools have been a boon to the city in the employment of quite an army of her people on their well-paid lists. In ten years there has been an increase from the original two rooms to twenty-four in the Exchange building. Additional rooms from time to time were taken in other buildings until a home of their own was erected in the beautiful structures on Wyoming Avenue. Even these were not sufficient and offices were rented. At present the schools wholly or in part occupy eighteen separate buildings, and a mammoth one is now in course of construction. There are sixteen different offices in as many of the largest cities of the United States and Canada. The printing and binding plant now being erected on Ash Street will be the largest private plant in the world. The schools have now six instruction cars for the purpose of soliciting enrolments among railroad men. They traverse nearly all the leading railroads and assist in instructing over 15,000 railroad men.

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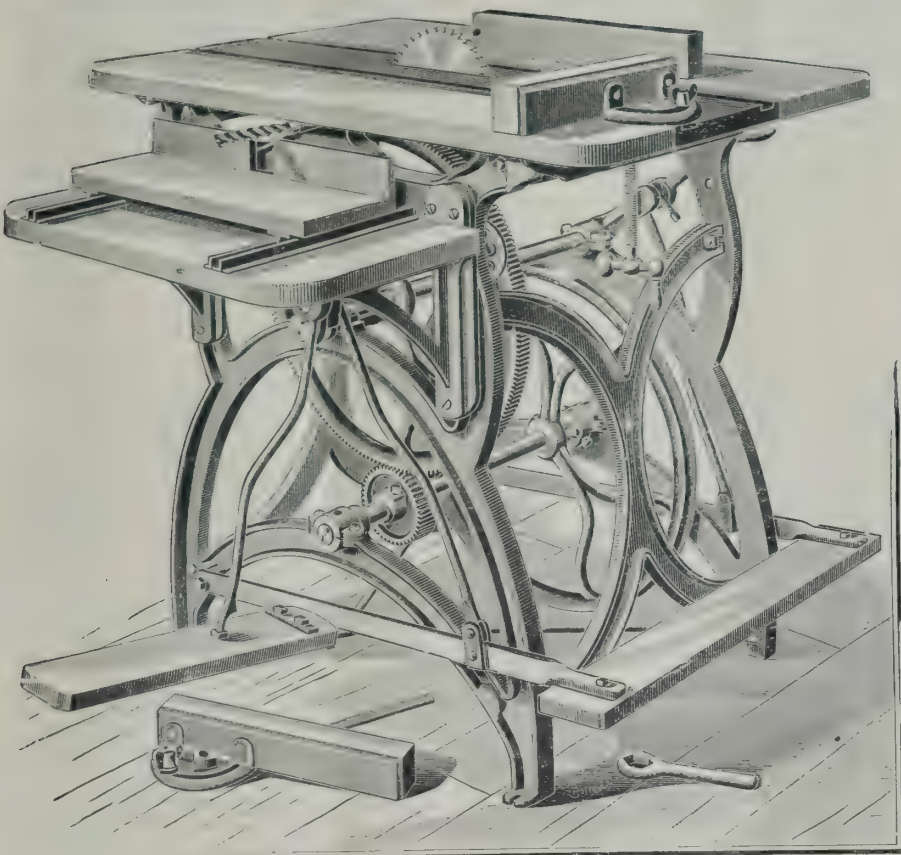
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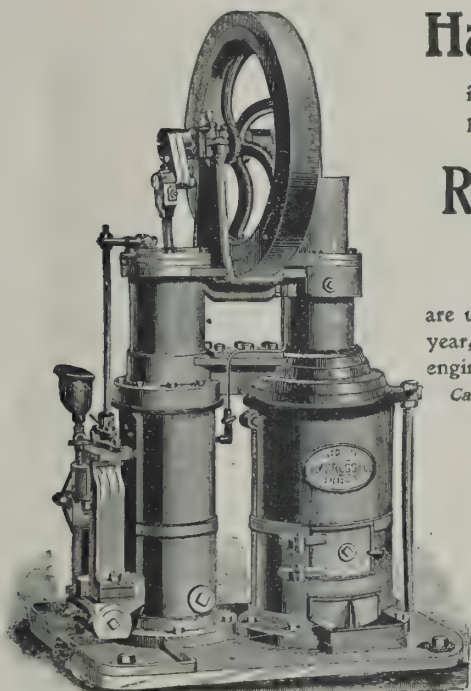
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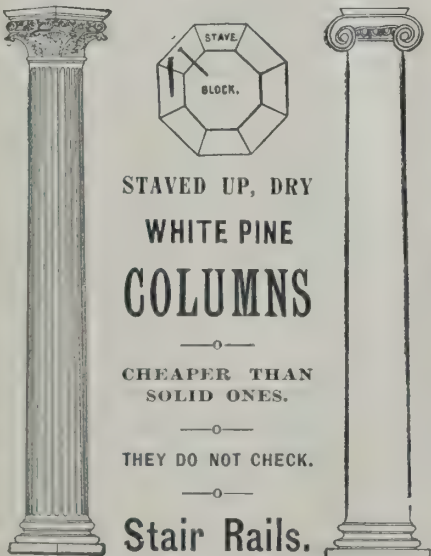
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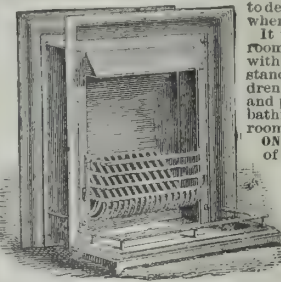
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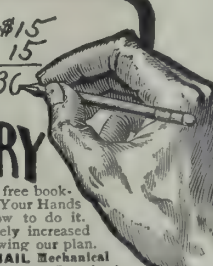
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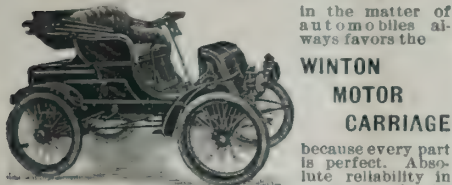
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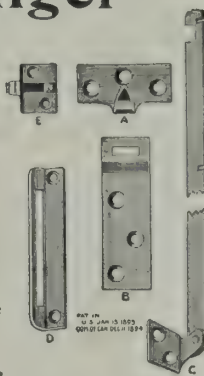
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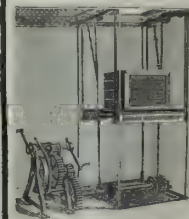
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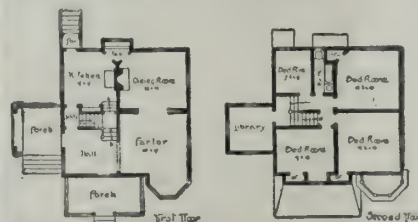
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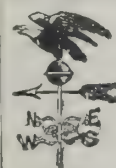
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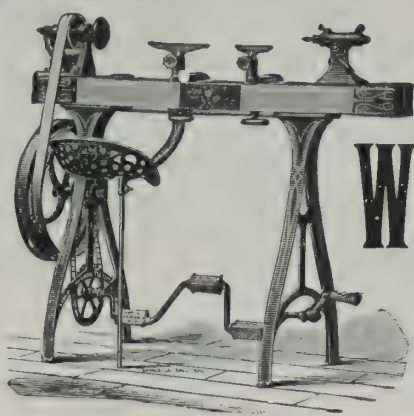
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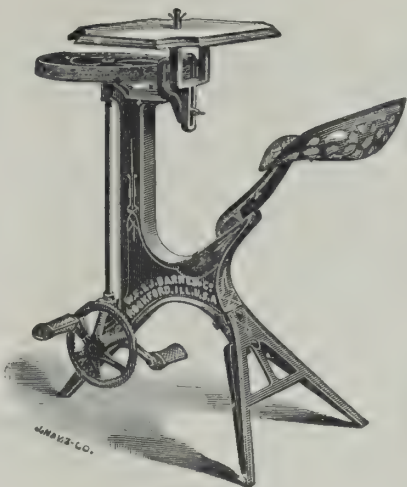
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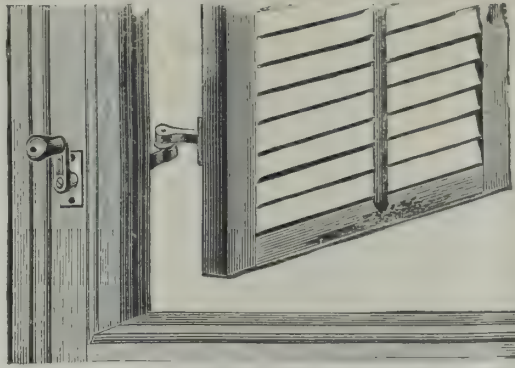
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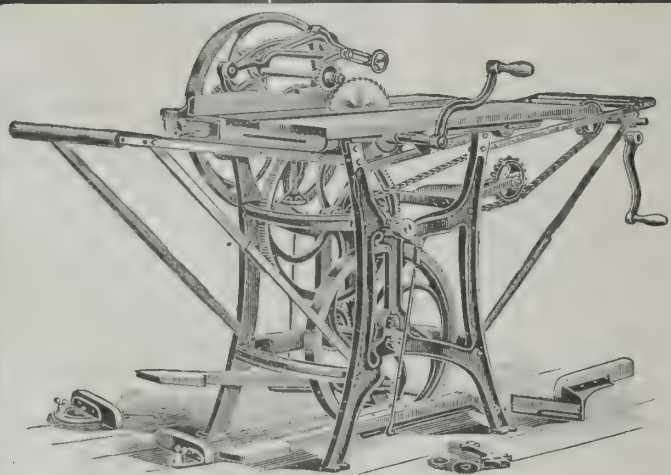


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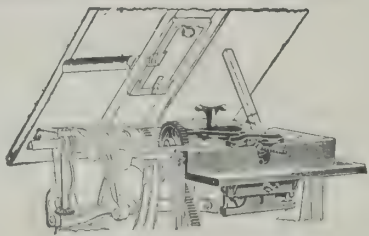


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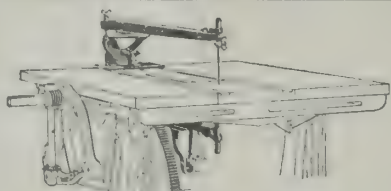
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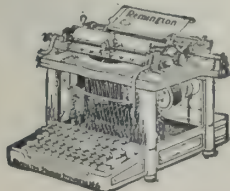


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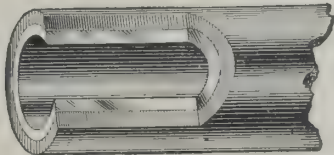
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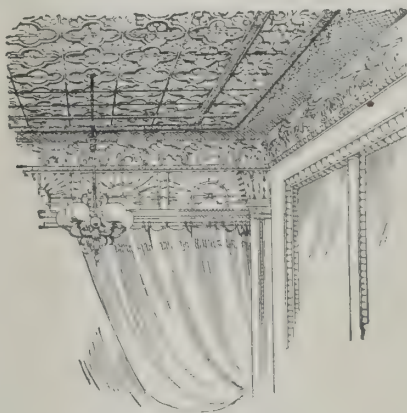
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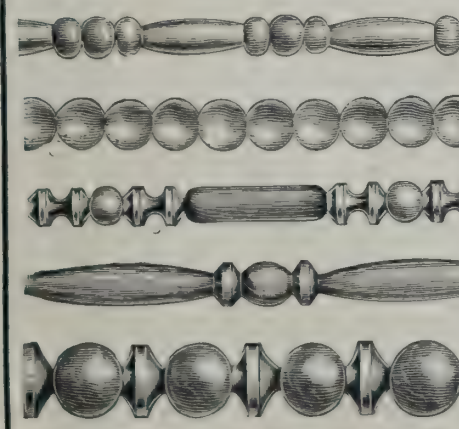
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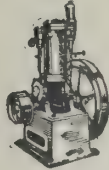
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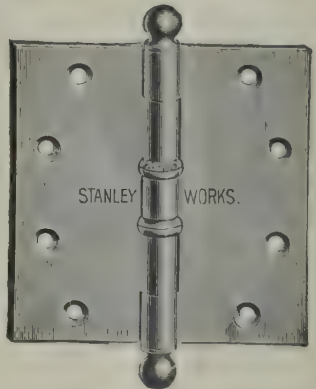
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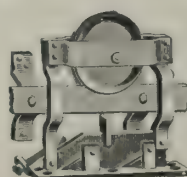
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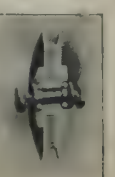
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ENTRANCE TO THE RESIDENCE OF THOMAS C. WALES, ESQ., CHESTNUT HILL, MASS.—See page 36.

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MONTHLY COMMENT.

THE results of a series of tests of fireproof partitions, conducted by the Department of Buildings for the Boroughs of Manhattan and the Bronx, have been recently made public. The object of the tests was "to record the effect of fire of one hour's duration, commencing at 500° F. and increasing to 1,700° F., followed by the application of water for two and a half minutes on the fire side. The area of each partition under investigation was to be at least 137.75 square feet, with a width of 14 feet 6 inches and a height of 9 feet 6 inches." The tests were notable not only for the care taken in conducting them, but as being the first thorough tests of partitions ever made. Nearly twenty forms of partitions were included, the types represented comprising metal, lath and plaster, terra cotta block, plaster composition block, and concrete block.

The results, as a whole, were highly satisfactory, but while the utmost care was taken to submit the various constructions to the severe requirements laid down at the outset, it was impossible to avoid certain conditions which make the conclusions partly theoretical. The partitions examined were built directly on a low wall of brick, without wood at the base, and included no window or door openings. The area tested, moreover, was limited, and hence the conditions which apply practically in every structure were not quite accurately present. With but one exception neither fire nor water passed through a partition, and in no instance did a dangerous quantity of radiated heat pass through any partition. The plaster block partitions lost a portion of their plaster blocks by being washed away under the action of the hose stream. In examples of cellular plaster blocks the inner shells were washed away, exposing the hollow interior. It would therefore seem as though, in partitions of those types, new construction would be necessary after a fire instead of patching up. In metal, lath, and plaster partitions the plaster covering was largely washed away, but no injury resulted to the metal structure. In partitions of terra cotta blocks and concrete blocks the inside coatings of plaster were partly destroyed, but no other injury resulted. Measured by cost of repair and relative condition after the fire, the latter types of partitions yielded the best results.

THE hall is one of the most neglected parts of the house, though in some respects it is the portion most frequently used, and it is certainly the part the stranger is most apt to see. In the country house, where one is not restricted to the exacting requirements of a twenty-foot lot, the size and disposition of the hall is a problem easily solved. In such houses the hall becomes, quite naturally, a room, and may be treated in a manner at once comfortable, hospitable, and attractive. But in the city house, where the hall is too often simply a passage, that is used only because it must be, and from which one eagerly passes into the more attractive parts of the house, it is generally neglected. As a matter of fact, the hall, being the first part of the house to be entered, should be as cheerful and pleasant as possible. The wall treatment should take into account the amount of light and the fact that it is more likely to be rubbed against and soiled than the walls of large rooms. A table for packages and hats will be found sometimes more useful than a hat rack, although accommodations for coats and umbrellas are imperative. Hall furniture is not always as well suited to its purposes as it should be, but better designs are now on the market than could formerly be had. The wall, while available for pictures, should not be made a catch-all, where ornaments may be placed that do not fit in elsewhere.

THE American invasion of Europe is about to assume architectural form in the erection of a great office building in London. It is a type of structure wholly new to England, although the building laws will not, at present, permit a greater height than seven stories. But the mere matter of a building law contains no detriments to Yankee ingenuity, and it is confidently stated that, in a few years, modifications of existing requirements will be had which will enable the projectors of the enterprise to erect a genuine American sky scraper. It is to be hoped that if this is done, it will not be on the New York model. The art of high building design is most industriously practised in the metropolis of America, with the result that the only genuinely artistic high office building in New York is by a Chicago architect! There are some others of great merit and real interest, it is true, but the Chicago-designed building has, after four or five years, no rival. London authorities may well shrink before giving permission for the erection of a New York sky scraper; that structure has only its bigness and its convenience to recommend it; of art, as such, there is little if any.

MANY flourishes of trumpets have announced a model city as one of the attractions of the St. Louis Exposition. It is quite time we had such an object-lesson, and as no American city has yet been able to put itself forward as a model town it may be presumed, at the outset, that it will be quite unlike any existing community. A sad controversy that seems to have arisen over the question as to who first made this suggestion adds to the interest of the preliminary discussion and will doubtless have no effect in giving us the final model results. That American cities need many radical improvements, that they are badly planned, badly provided with underground conveniences, filled with unhealthy, undesirable buildings, and generally in need of object lessons, are facts that no one will dispute. The project of a model city is, however, a large undertaking, and is not likely to succeed even partially, without the widest consideration and the broadest study. A city is not an aggregation of houses designed by an architect, erected on streets planned by an engineer, and provided with the resources of modern sanitation; but it is the grouping together of a large number of people having many different purposes in life and engaged in many avocations. To condense all these interests within model limits and incase them in model structures designed in a model way is certainly a model object that the to-be-modeled populace of America must await with the utmost interest.

Does good art cost more than bad art? The question involves a contradiction, for the moment a thing becomes bad it ceases to be a work of art. Logically there can be no such thing as bad art, for it is not art at all if it be bad. But the exigencies of language are such that the term "bad art" is used as a convenient phrase for expressing a state of things that every one should abhor, but which still finds its supporters, abettors, and producers. So far as money outlay is concerned good art should cost more than bad art. The laborer is worthy of his hire, and if he produces a good thing he is worthy of a good price. In the long run good art is more economical than bad art, since it lasts longer, and after a period of years may have an enhanced value, while the object in bad art will have suffered a total eclipse and be a complete loss. The financial side of good art is very evident and offers no room for comment. It pays.

ROADS AND HOUSES.

PERFECT agreeableness in a suburban site can not be had without perfect unity in every part. A good house belongs as naturally on a good road as a good man does in a church. Means of access lies at the foundation of all building operations, in the city or country. The road comes before the house, and its own attractiveness or lack of attractions will determine the character of the edifices erected upon it.

The foundation of a good road is a good road bed. It must be firm and strong, well made, well cared for, quickly rid of water after a rain, and not too dry and dusty in drought. It must be strong enough to bear all sorts of traffic, from heavy trucks to light pleasure carriages. And it is further essential, when the cost is met by assessments on the adjacent property, that it be not too costly. These are elemental conditions that must be met and solved before any sort of a road can be built; and the success of the houses that will border it must depend on what is done in the beginning.

The suburban road, however, must be more than a simple means of communication, and do more than answer the needs of the traffic that passes over it. When the roads for a suburban community are laid out they must first of all form an artistic plan as a whole. The corners must not be too abrupt, there must be no awkwardly shaped lots, grades must be avoided when possible, the needs of the future must be thought of. The first step in road embellishment is a good plan.

Then come the accessories—the sidewalks and trees, the borders of grass and lawn, the planting of shrubs and flowers and such other ornamental additions as may be available. Some illustrations are given elsewhere in this magazine of suburban roads, and only a glance at the engravings is needed to demonstrate how much the roadway and its adjuncts help in the general effect. In the road at Ogontz every advantage has been taken of the natural surroundings. The grades are slight and not more than are needful to make the roadway easy of ascent and descent. The curbs are neatly laid, and a shallow band of grass separates the walk from the road bed. A bank of green again surrounds the corner lot, which is incased with privet. The road needs trees, it is true, but the older trees that flourished here before the site was thought of for building purposes have been retained as far as they could be, and the newer trees, just within the house lot, will grow and shade the space in a few years.

And then, the roadway finished, with its walks and strips of green, its trees and well-kept borders, comes the disposition of the houses. Here, too, the view in Ogontz teaches an impressive lesson, for the houses are irregularly disposed, as they ought to be on a road with graceful curves, and with a graceful languor in its movements as though not in too great haste to reach its point of origin or of furthest development. Squarely set houses, lots of a single size, rigidity, all these painful elements are ignored in this plan, which is admirable.

Views in the newly laid-out streets of Prospect Park South, Brooklyn, carry on the lesson further. There is the same general plan, of a roadway with sidewalks separated by strips of grass. But the grass strips are wider here and shrubs and flower-beds add to the picturesque effect. Here, also, is a young community in which the trees have not yet begun to grow, but which before long will be amply shaded by the growth of trees already generously planted. The ground is level, and therefore there are no grades; and the streets are straight, and hence the houses are placed rather squarely upon them. But formal as this may seem, the general effect is not formal, but full of grace, charm, and movement.

Still another type of road is furnished in Albemarle Road in the same settlement. The founders of this community have realized the value of grand dimensions in outdoor art, and in the last-named street have provided great centerpieces, with shrubs and flowers, that help in the general result. It is a beautiful and delightful way in which to make a roadway. It is a direct encouragement to good architecture to build roads such as this.

FIRE WASTE IN 1900.

THE review of the fire waste in the United States during 1900, as given in Chronicle Fire Tables, is very suggestive. The classification is so complete as to give underwriters a fair idea of what it has cost to carry the various classes of risks in the United States. The summary shows 109,092 fires in the United States, against 105,342 in 1899 and 94,062 in 1898. Dwellings and boarding-houses constituted 46.2 per cent. of the property burned. The losses by exposure were 27.6 per cent. of the whole. The loss in value amounted to \$161,000,000. June was the most disastrous month, the property loss being \$19,065,240, and the insurance loss \$11,916,545. In twenty-five years December gave the worst results.

USE OF FORMAL SHRUBS FOR GARDEN DECORATION.

For a long time the formal gardens which are found in such numbers and in such high perfection in England and in Italy have been greatly admired by American travelers, but it is only very recently that any effort has been made to carry out this style of gardening in this country. With the exception of the park and garden, with its magnificent and abundant array of curiously shaped trees and shrubs, belonging to Mr. H. H. Hunnewell at Wellesley, Mass., little attempt has been made to introduce this species of landscape work until within the last year or two. It is possible that in the past it has been considered that this character of gardening did not harmonize with our rugged American landscape, or it is possible that it did not seem to lend itself especially as an adjunct to American architecture. With the introduction, however, of foreign influences in connection with country homes, the laying out of stiff and formal parterres has become a possibility, and not a few architects have appreciated this fact, and have seized upon this method of carrying out a general scheme of embellishment, in which the art of the architect and the science of the gardener are happily combined.

No more happy illustration of the use of the garden in supplementing architectural effect can be cited than the beautiful residence of Mr. Giraud Foster, at Lenox, Mass., in which the architectural effect of the mansion relies for its charm, not only upon the beautiful location selected for a site, provided, as it is, with a background of forest trees, but the beauty of which has been greatly enhanced by means of the attractive approaches to the house through poplar avenues, and by the formal laying out of the garden in the courtyard and on the terrace adjoining the mansion.

At a number of important country places similar plans for laying out formal gardens are now being carried out, but no situation lends itself better to such treatment than a courtyard or terrace.

The American who visits England and becomes charmed with the attractive effects to be obtained by the use of the yew has a bitter disappointment in store when he tries to reproduce such an effect in an American garden. Some of the shrubs and trees which flourish so beautifully in England seem to be entirely unadapted to American soil and climatic conditions. The yew will grow in American soil, but the Washingtonia variety is about the only form of yew which seems to flourish to any extent. This is certainly a great disappointment to any one who expects to obtain the interesting effects that one will often find in an English garden. It is a scraggy, unattractive shrub, and it will not lend itself to taking an attractive form except after years of careful growth and pruning. The box is a far more available shrub with which to experiment here. It is hardy; it is luxuriant; it may be trimmed into almost any shape, and in many locations it grows quite rapidly. It is rich in tone, and, unless a garden is being laid out on a very large scale, it is probably the most satisfactory shrub to make use of in order to quickly obtain formal effects. The cypress is also a shrub which is well adapted to our climate.

In the views reproduced, representing "The Terraces" in a garden at Llewellyn Park, Orange, N. J., box and cypress have been extensively used. The color effects have been produced by varying golden cypress with the silver or gray-green variety. The cypress is also used in some of the low plateaus or beds which may be seen within the box border. Juniper was tried, but, although it is an attractive shrub, it is very difficult to transplant with any success, and many of these shrubs were lost. Juniper can hardly be recommended for general use. All of the shrubs in this garden are hardy, with the exception of the bay trees, which are used at different points on the terrace, and the tubs in which they are placed are concealed by flowering plants which are placed about them. The golden box has been used with very good effect in

and occasional replanting has been kept in the low and regular shape shown in the photographs.

The garden shown in the photographs is located on a terrace situated on the steep slope of Orange Mountain. The landscape effect is rather unusual, as nine terraces are located back of the mansion, and rise one above another almost to the top of the mountain. As the direct ascent would be almost too steep for a path, the summer-house located on the upper terrace is reached by a flight of rustic steps which start from the main entrance of the mansion. The terraces are banked with turf, while the border of each terrace is laid out with flowering plants in order to relieve the green background with a strong contrast of color. The effect from the driveway below is quite interesting, owing to the novelty of the treatment employed, while the view from the summer-house in looking down upon the terraces below produces an entirely distinct and separate impression.

"THE TRAGEDY OF ARCHITECTURE."

In modern architecture, remarks Mr. Guy Wilfrid Haylor, in a suggestive article in the Westminster Review, the despotism of arbitrary style is no less idiotic and offensive than in dress. One style of building is in vogue now, then another, just because we want something fresh, not because one or the other is more suited to the nature and purposes of the building, or better adapted to the climate, or more expressive of our modern civilization.

The introduction of variety into architecture of course is commendable, but only where it is honest and expressive of the nature of the structure. It is worthy and welcome that our streets should have some diversity. Too long they have been in the nightmares of a pampered and petted conventionality. But surely, when all thoughts of convenience, utility, and honest adaptability are thrown on one side in our efforts to produce an eccentric line of facades, we have passed from the boundary of sense to absurdity.

We live in a day when everything must be practical among the upper classes, as well as among the usually called "common people;" the practical man is a dictator with a sway as influential as it is effectual. But, strange to say, as regards architecture, all sorts of incongruous things are permitted and even encouraged, evi-

dently because they are the latest or most modern.

In the congested and break-neck state of our present civilization, what should be the legitimate influence of natural conditions on architecture is quite neglected. Prior to the great industrial revolution which was the characterizing feature of the Victorian era, architecture had only problems presented by nature to face; life was simple, and what artificiality existed was little and inconsequential. But with the introduction of machinery, mechanical contrivances entered intimately into every-day life, revolutionizing all forms of building and bringing about untold complexity in architectural problems. Steam, electricity, and free education produced a society different to any that had previously existed. The ends of the earth were united, and the most tremendous action and reaction came into play.



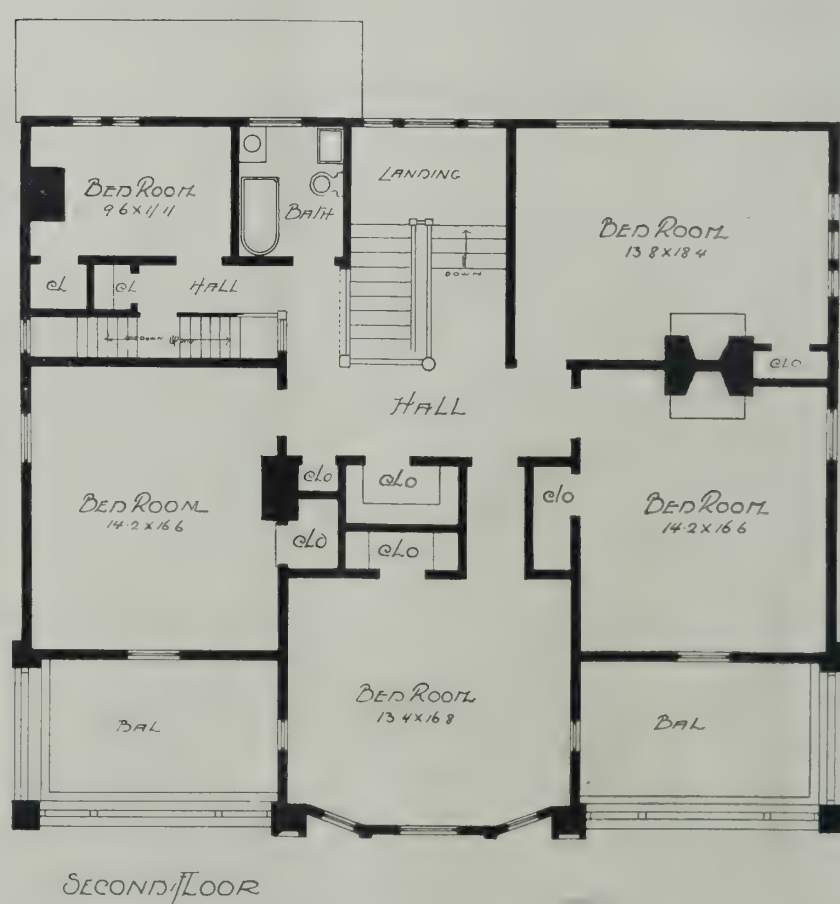
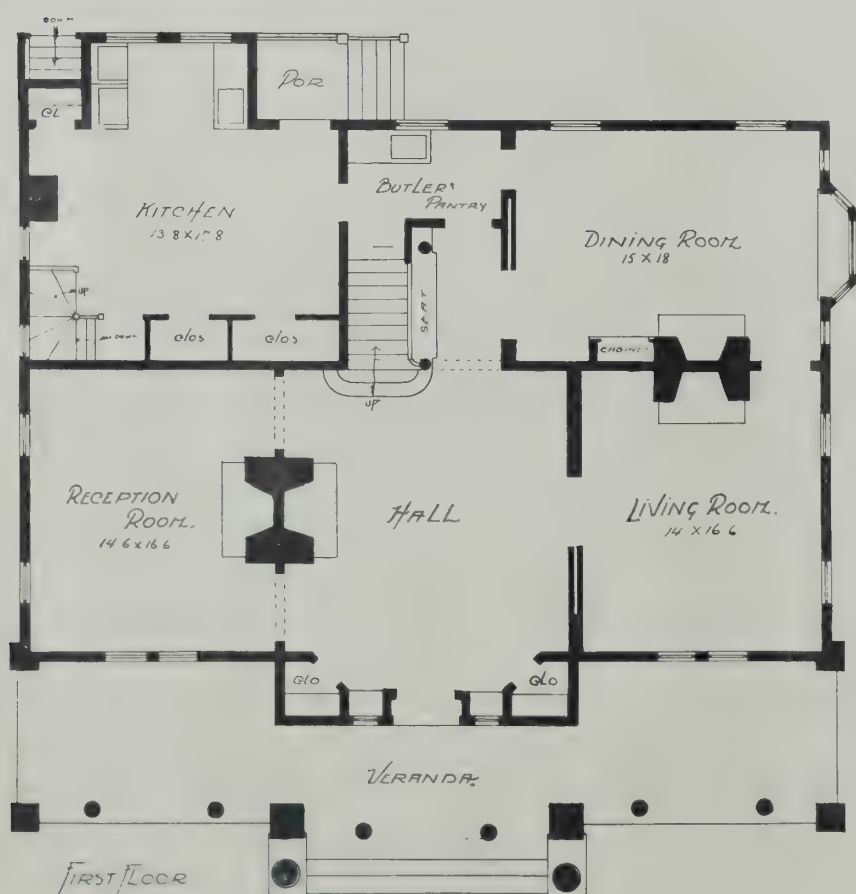
ONE OF "THE TERRACES" AT LLEWELLYN PARK, ORANGE, N. J.



A FORMAL GARDEN AT LLEWELLYN PARK, ORANGE, N. J.

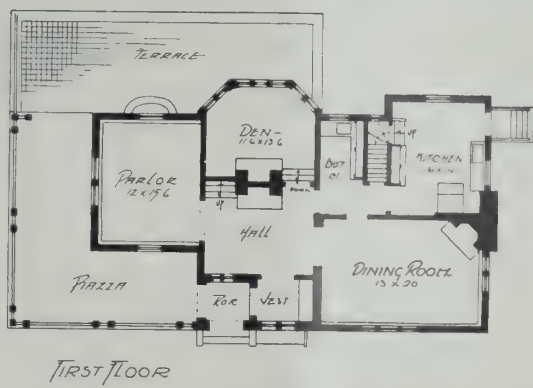
forming crescents and diamond-shaped plateaus. It is hardy, and assumes a beautiful golden luster when at its best. The umbrella pine from Japan is also a beautiful tree, which grows in a regular shape when properly looked after.

In laying out a garden of this character, care should be taken to introduce at different points color effects for purposes of contrast. In order to introduce brilliant reds and yellows, alternanthera has been used in carrying out the geometrical designs which may be noticed in some of the beds. It may be of interest to the reader to know that the photographs were taken only three months after the garden had been laid out, and they, therefore, give a fair idea of what may be done with careful handling in a short time. It should be remarked, however, that the box bordering the paths is some thirty years old, but by careful pruning

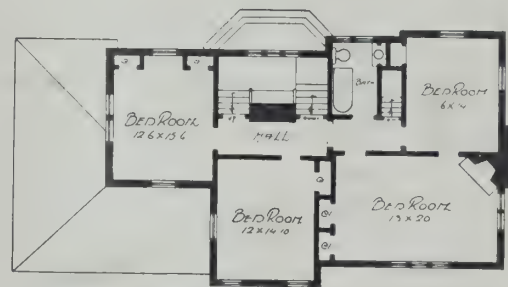


A RESIDENCE AT FANWOOD, N. J.—See page 36.

MR. ABNER J. HAYDELL, ARCHITECT.



FIRST FLOOR

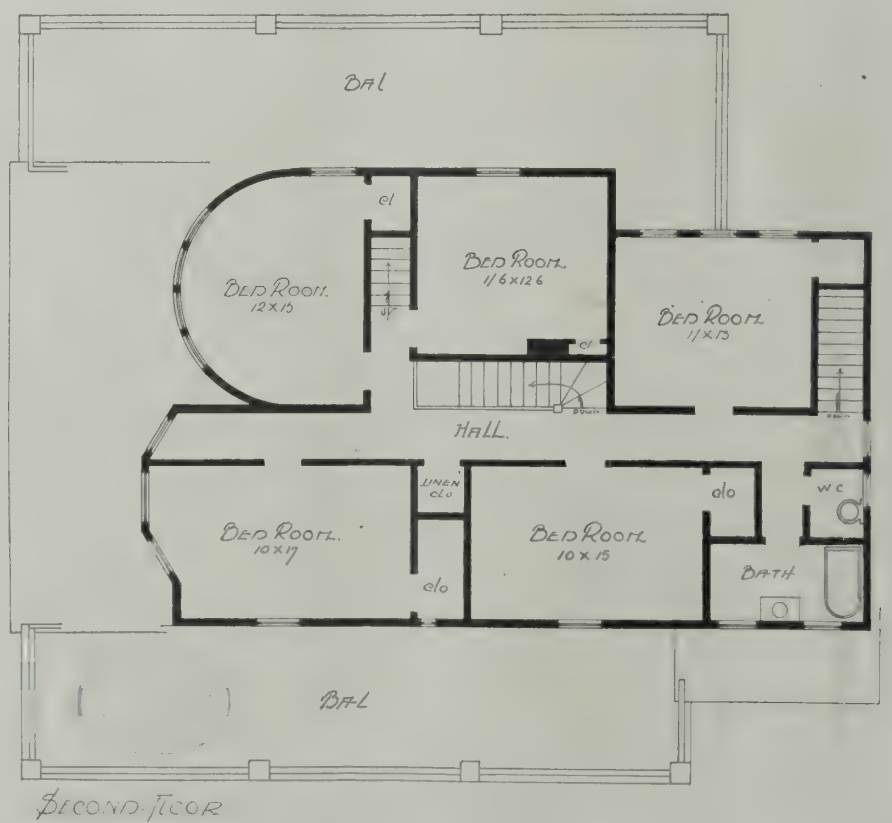
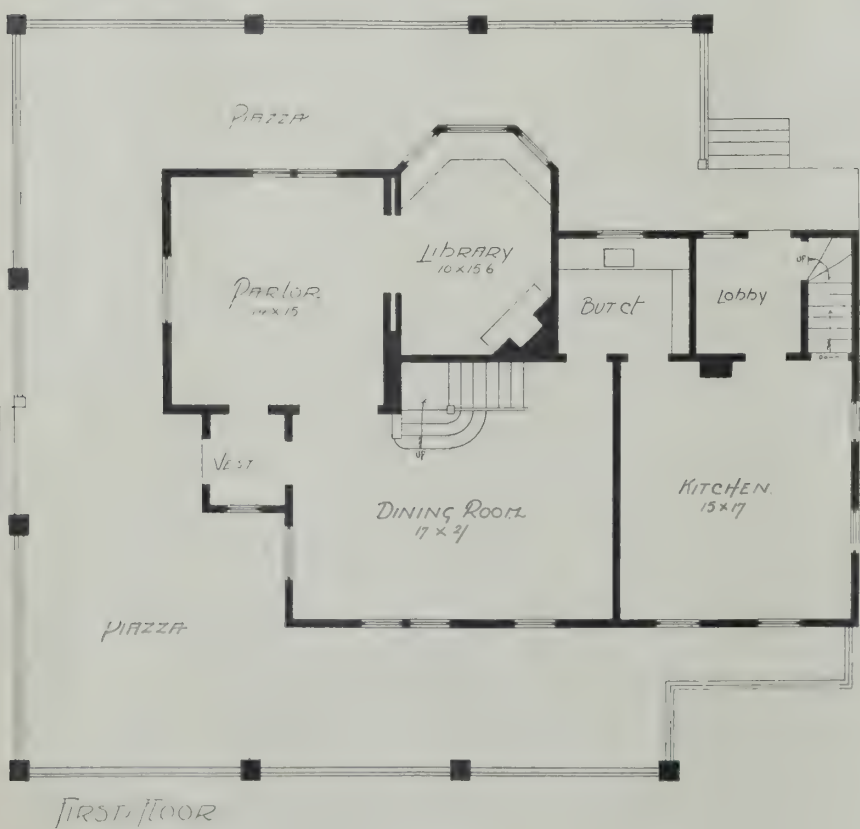


SECOND FLOOR



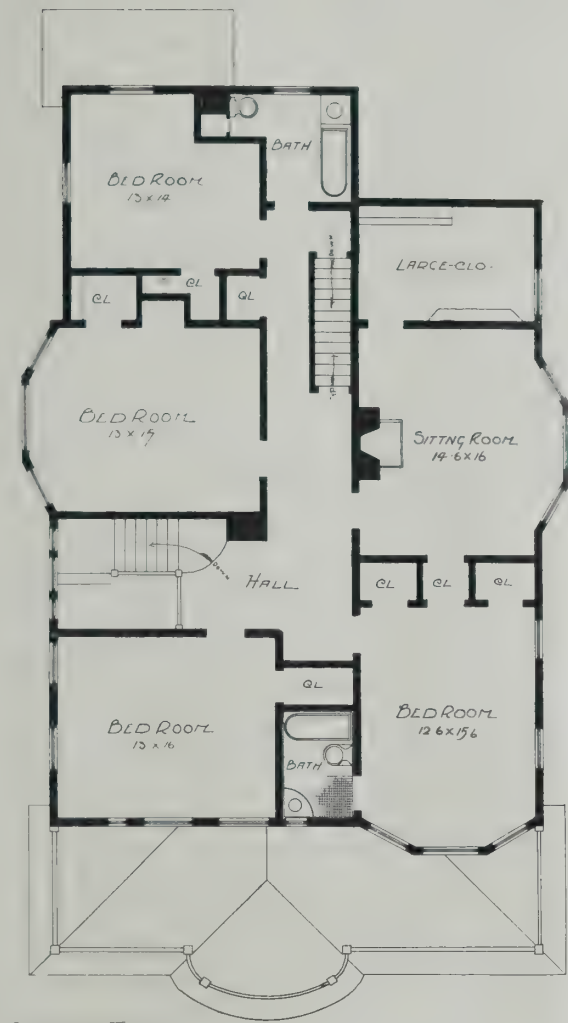
AN ENGLISH VILLA AT OGONTZ, PA.—See page 36.

MR. LAURENCE VISSCHER BOYD, ARCHITECT.

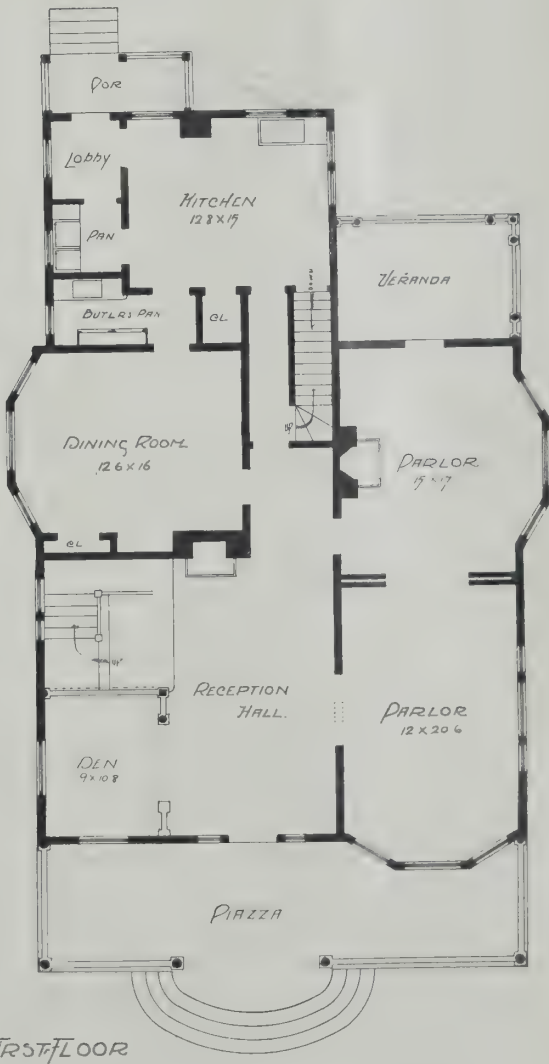


A DWELLING AT SOUTH HAVEN, MICH.—See page 36.

MR. A. M. WORTHINGTON, ARCHITECT.

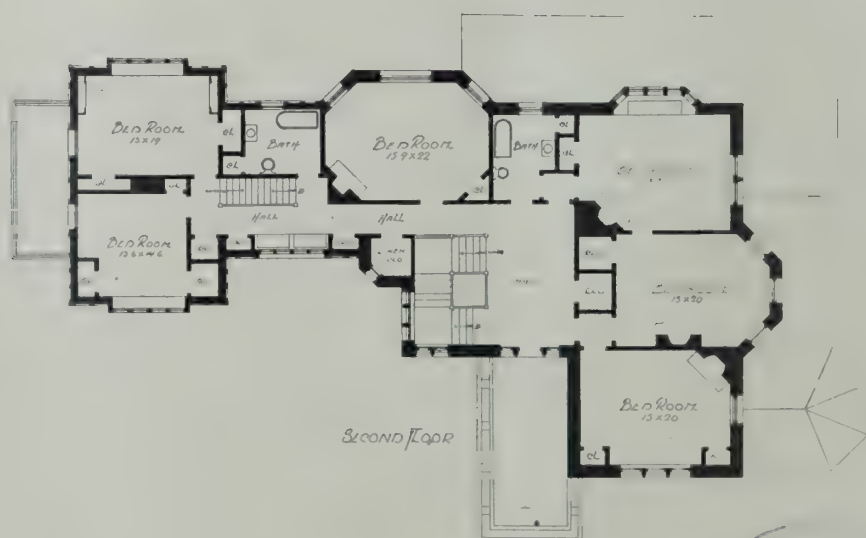
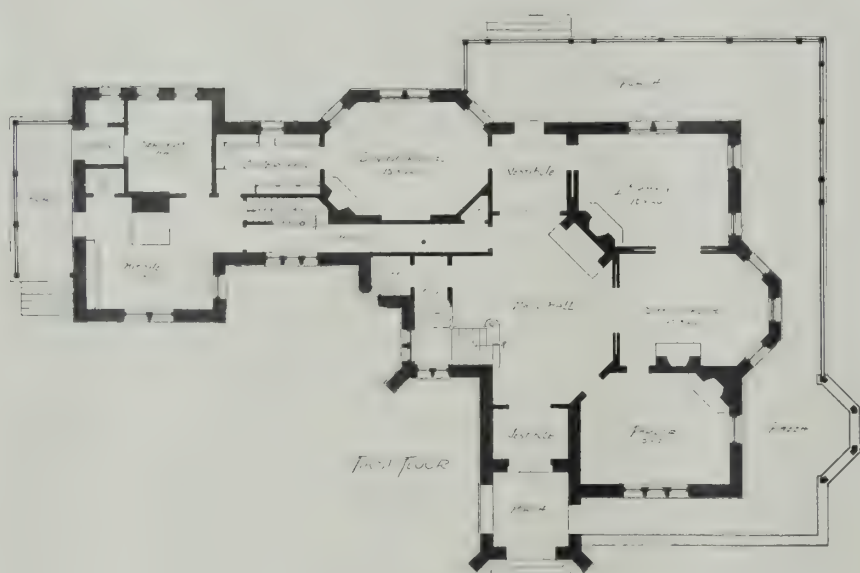


SECOND FLOOR



FIRST FLOOR

A RESIDENCE AT BRIDGEPORT, CONN.—See page 36.
MR. C. T. BEARDSLEY, ARCHITECT.



A STONE RESIDENCE AT MERION, PA.—See page 36

MR. WILLIAM L. PRICE, ARCHITECT.



A STONE RESIDENCE AT MERION, PA.—See page 36.

MR. WILLIAM L. PRICE, ARCHITECT.



BUCKINGHAM ROAD.



ALBEMARLE ROAD, LOOKING SOUTH.



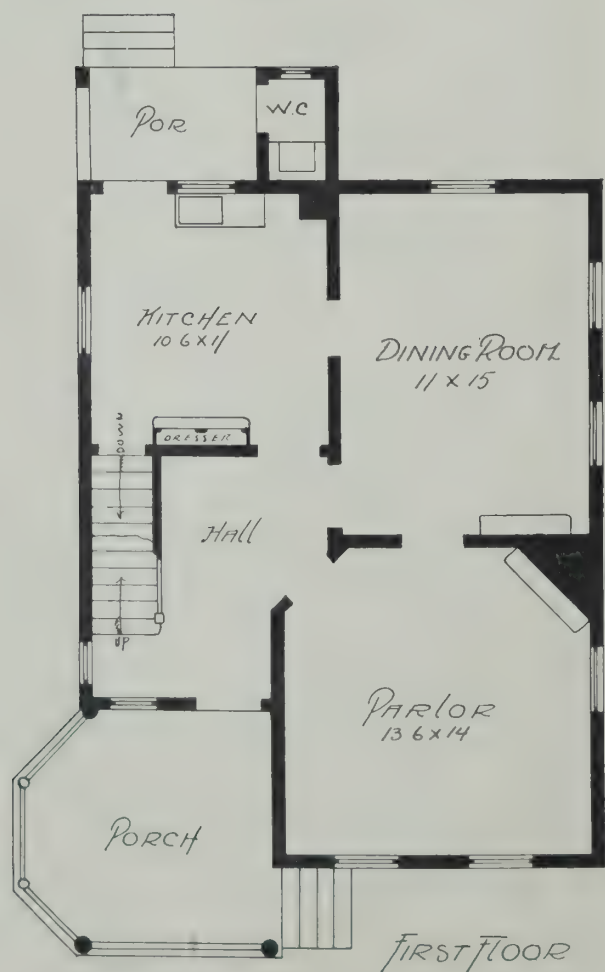
ALBEMARLE ROAD, LOOKING NORTH.



ENTRANCE FROM THE RAILROAD STATION TO OGONTZ, PA.
ARTISTIC ROADS.—See page 36.



A RESIDENCE AT PROSPECT PARK SOUTH, BROOKLYN, N. Y.—See page 36.
MR. JOHN J. PETIT, ARCHITECT.



A MODERN DWELLING AT GLENSIDE, PA.—See page 37.

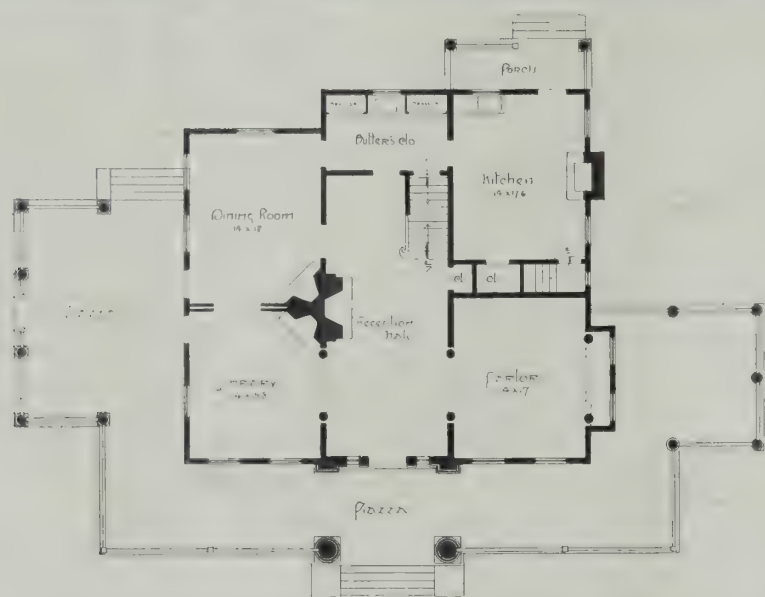
MESSRS. ALBERT ELLIS YARNALL AND E. A. WILSON, ARCHITECTS.



A Castle Crowned Pinnacle.
The Walls of Gradara.

Sarzana, Castle of the Castruccio.
Romana.

SOME MEDIÆVAL TOWERS AND CASTLES OF ITALY.



A RESIDENCE AT ALLENHURST, N. J.—See page 37.

MESSRS. CHILD & DE GOLL, ARCHITECTS.



A RESIDENCE AT CHESTNUT HILL, MASS.—See page 37.
MR. H. S. FRASER, ARCHITECT.

A MODERN DOORWAY.

THE illustration on page 21 reproduces the entrance to the residence of Thomas C. Wales, Esq., at Chestnut Hill, Mass. It was designed by Messrs. Winslow & Bigelow, architects, Boston. The engraving is made from a photograph taken specially for the BUILDING MONTHLY.

A RESIDENCE AT FANWOOD, N. J.

THE residence illustrated on the cover, and also on page 24, has been recently erected at Fanwood, N. J. A characteristic feature is the four square red brick columns at the front, which are laid up in red mortar. The underpinning is built of red brick laid up in a similar manner. The superstructure is constructed of wood and it is covered on the exterior framework with matched sheathing, building paper, and then clapboards. The whole exterior is painted a pure white. The blinds are painted a bottle-green. The roof is covered with shingles and stained a deep red, crowning the whole with a Spanish-Italian effect. The chimneys are topped out with red brick. Dimensions: Front, 45 ft.; side, 40 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The plan shows a central hall, square in form, which is trimmed with dark oak. The staircase hall, which is recessed, is separated by two semi-circular arches, the central sweep being supported on a column with a Corinthian capital. The staircase is a handsome one with ornamental balusters and rail. An attractive seat, with a corresponding column, is placed at the side of the stairway. This hall has a wooden cornice, and also contains an open fireplace built of Tiffany Roman brick, with the hearth and facings of the same and a mantel. The reception-room is separated from the hall by two archways. This room is trimmed with white pine and is treated with white enamel. The fireplace is built of buff brick with the facings of the same and a hearth of tile and a mantel of white enamel with a mirror over the same, the whole being of a Colonial design. The living-room is treated in a similar manner with trim and fireplace. The dining-room is trimmed with oak and it has an open fireplace built of buff brick with the hearth and the facings of the same and a mantel of oak. There is also a wooden cornice and a china cabinet built in complete. The butler's pantry is trimmed with yellow pine and is furnished with drawers, cupboards, and dresser complete. The kitchen and laundry are trimmed with a similar wood, and each is fitted up complete. The second story is trimmed with pine and contains five bedrooms, seven closets, linen closet, and a bathroom. The trim on this floor is treated with white enamel. The bathroom is wainscoted and is furnished with porcelain fixtures and exposed nickel-plated plumbing. There are two rooms and ample storage room on the third floor. A cemented cellar contains its various apartments separated by brick partitions, and a furnace-room, coal and wood bins, etc. Mr. Abner J. Haydell, architect, 156 Fifth Avenue, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

AN ENGLISH VILLA AT OGONTZ, PA.

THE engravings shown on page 25 illustrate an English villa recently erected for Wm. T. B. Roberts, Esq., at Ogontz, Pa. The underpinning, terrace, and entranceway are constructed of red brick laid up in red mortar. The remainder of the building is beamed, while the spaces between the beams are filled in with plaster work. These beams are stained a dark-brown color. The gable over the entranceway is provided with a sun-dial placed in the panel between the two windows. The sashes are painted white. The roof is covered with shingles and stained a deep, brilliant red. Dimensions: Front, 49 ft.; side, 30 ft., exclusive of porch and terrace. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The entrance is into a vestibule trimmed and paneled with cherry and furnished with a cluster of leaded glass windows, a paneled seat, and a tile floor. The hall is trimmed also with cherry and has a beamed ceiling and also an open fireplace, furnished with Roman brick hearth and facings, and a hooded mantel, with an inscription, "East, West, Home's Best," cut in under the shelf. The broad, spacious stairs rise around this chimney, and each landing is provided with a paneled seat and a cluster of leaded glass windows. The den underneath this stairway and below the level of the main floor is trimmed with cherry and is provided with an open fireplace complete. The drawing-room, or parlor, is trimmed with white pine and is treated with white enamel, while the walls are treated with a greenish tone of coloring. The dining-room is trimmed with cherry and is a most attractive apartment. It has clusters of small leaded glass windows, a dado of plain blue paper up to a height of six feet, at which point a plate-rack is placed, and extending around the room; the space above this rack is cov-

ered with a heraldic design on a deep blue background. The ceiling is beamed and paneled. The open fireplace is built of Roman brick with the hearth and facings of the same and a mantel. The butler's pantry is trimmed with yellow pine and is well fitted up with drawers, dressers, cupboards, and sink. The kitchen is trimmed with yellow pine, and the walls are covered with a blue tile-paper with sanitary effect. It contains a porcelain sink, dresser, and a range made by the Cox Stove Co., of Philadelphia, Pa. The second story contains four bedrooms, large closets, and one bathroom; the latter has a tiled floor and wainscoting, and is furnished with porcelain fixtures and exposed nickel-plated plumbing. Two of the bedrooms are finished with sycamore and the remaining two with white enamel. There are four bedrooms, bathroom, and ample storage. A cemented cellar contains laundry, furnace, coal and wood bins. The house is supplied with water, electric light, gas, and all conveniences. Mr. Laurence Visscher Boyd, architect, Fifteenth and Market Streets, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A DWELLING AT SOUTH HAVEN, MICH.

THE dwelling shown on page 26 has recently been erected for Mr. George H. Myhan, at South Haven, Mich. The foundation is built of local field stone laid up at random. The superstructure is of wood and the exterior framework is covered with sheathing, and then clapboards on the first story and shingles on the second and third stories. These clapboards and shingles are painted a dark green, and the trimmings are painted white. The roof is covered with shingles and left to weather finish. Dimensions: Front, 43 ft. 6 in.; side, 33 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second and third, 8 ft. The interior throughout is trimmed with whitewood and painted in colors. The vestibule entrance opens into the parlor and into the dining-room. The dining-room contains the staircase, which is of ornamental design, with column and grille effect rising to the ceiling. The parlor is of good dimensions and is separated from the library by double sliding doors, and it contains a paneled divan and an ornamental pressed brick fireplace and shelf. The butler's closet is fitted with drawers, shelves, cupboards, and sink. The lobby is large enough to admit ice-box. The kitchen is fitted up complete. The second floor contains five bedrooms, large closets, and a bathroom; the latter is wainscoted and furnished with porcelain fixtures and exposed nickel-plated plumbing. The third floor contains one bedroom and ample storage room. The cellar contains a Marshall furnace, coal bins, etc. Cost, \$3,300, complete. Mr. A. M. Worthington, architect, South Haven, Mich.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT BRIDGEPORT, CONN.

A RESIDENCE recently erected for Mr. A. H. Canfield, at Elmwood Place, Bridgeport, Conn., is reproduced on page 27. The underpinning is built of rock-faced blue stone, laid up ashlar. The superstructure above is of wood, and the exterior framework is covered with sheathing, paper, and clapboards, and stained with Cabot's deep red shingle stain. The roof is also shingled and stained a deep green. The trimmings are painted a darker shade of red than body. Dimensions: Front, 39 ft.; side, 54 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The interior arrangement is most complete. The entrance is into a large reception hall, which is treated in Flemish oak, and contains a most unique den, separated by columns rising to ceiling, with the spaces filled in with spindle-work, and a staircase with broad landing and newel-posts, balusters and rail. There is an open fireplace, built of brick, and furnished with tiled facings, and a hearth and a mantel. The parlors are finished in mahogany, and each has open fireplaces built of brick, with tiled facings, and hearths, and mantels of special designs. The dining-room is treated in a dainty manner with "punkie" yellow, and has a china closet and a buffet built in. The butler's pantry and kitchen are trimmed with N. C. pine, finished natural, and all are provided with the best modern fixtures. The second floor is treated with white enamel, and it contains five large bedrooms, eight large closets, and two bathrooms. The bathrooms have white enamel tiled wainscoting and floor and are furnished with Standard porcelain-lined tubs, J. L. Mott's fixtures, and exposed nickel-plated plumbing. The third floor contains one servants' room and ample storage. A cellar cemented with Rosendale cement contains a Thatcher furnace and other necessary fixtures. Mr. C. T. Beardsley, architect, Main and State Streets, Bridgeport, Conn. Mr. C. A. Bjorckland, contractor, 179 Wood Avenue, Bridgeport, Conn.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A STONE RESIDENCE AT MERION, PA.

THE stone residence illustrated on pages 28 and 29 has recently been completed for William P. Gest, Esq., at Merion, Pa. The main part of the building is constructed of Foxcroft stone with Indiana limestone trimmings. The second story, over the kitchen extension, is treated in the German half-timber style, with brick between the beams and plastered with Meyer's stainless cement. The beams and all wood work are stained a dark brown. The roof is covered with a deep red shingle tile. Chimney tops are built of red brick. Dimensions: Front, 95 ft.; side, 55 ft., not including piazza and terrace. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The entrance to the house is through a broad vestibule, 7 ft. by 8 ft., trimmed and paneled with oak and furnished with a mosaic tiled floor. The main hall is trimmed with oak and has a paneled wainscoting. This hall is provided with a grand open staircase with broad treads and landings, and ornamental newel posts and balusters. There is a cut Indiana limestone mantel with a hood of Gothic style. The parlor, sitting-room, and library are trimmed with mahogany, and each has open fireplaces with tiled facings and hearths and mantels of special design. The dining-room is trimmed with oak and it has a similar fireplace. The butler's pantry is trimmed with chestnut and contains a dresser, closets, cupboards, sink, and drawers complete. The kitchen and servants' hall are also trimmed with chestnut, and the former contains a hearth provided with a Spears range, large dresser, pot closet, sink, etc. The toilet-room is conveniently located. The second story is trimmed with curly birch except the hall, which is trimmed with oak. The bathrooms are wainscoted and paved with tile, and are furnished with porcelain fixtures and exposed nickel-plated plumbing of Cooper's make. The bedrooms are furnished with large closets and open fireplaces provided with tiled facings and hearths. There are four bedrooms on the third floor, besides ample storage room. A cemented cellar contains a Makin & Kelsey furnace, laundry, and coal and wood bins. Mr. William L. Price, architect, 731 Walnut Street, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A GROUP OF ARTISTIC ROADS.

THE illustrations on page 30 reproduce four roadways whose general characteristics are commented on elsewhere in this number. These illustrations show the entrance from the railroad station at Ogontz, Pa., developed by Mr. Wm. T. B. Roberts, of Philadelphia, and three views from Prospect Park South, developed by Mr. Dean Alvord, of Brooklyn, N. Y. The engravings were made from photographs taken expressly for the BUILDING MONTHLY.

A RESIDENCE AT PROSPECT PARK SOUTH, BROOKLYN, N. Y.

A RESIDENCE recently erected for Dean Alvord, Esq., at Prospect Park South, Brooklyn, N. Y., is shown on page 31. The underpinning and first story are constructed of red pressed brick laid up in red mortar. The second story is covered with shingles on the exterior and is painted a silver gray color. The gables are beamed, and the spaces between the beams are plastered and painted a deep red, while the trimmings throughout are painted a cream white. The roof is covered with shingles and stained and finished in a moss-green color. Dimensions: Front, 40 ft. 7 in.; side, 54 ft., not including piazza. Height of ceilings: Cellar, 7 ft. 1 in.; first story, 9 ft. 9 in.; second, 9 ft. 3 in.; third, 8 ft. 2 in. The vestibule, with its Dutch tile floor, is reached by marble steps. This vestibule has a cluster of three windows and a paneled seat underneath the same. The hall is trimmed with red oak finished with a dull wax finish, and contains massive beamed ceilings and a paneled wainscoting, paneled seat, parquet floor, and an ornamental staircase recessed in alcove, under which there is a toilet-room conveniently located. The ingle nook has a tile floor, seats, and an open fireplace built of red brick with the facings of the same and a neat wooden mantel of Dutch style. The parlor and library are separated by a massive beamed arch supported on massive columns, fluted, and with carved capitals of the Ionic order. These rooms are treated with china-white enamel, and the former contains an open fireplace built of brick and furnished with tiled hearth and facings, and a mantel, with a shelf, supported upon two handsomely carved caryatids. The library has bookcases built in and both have parquet floors. The handsome dining-room is trimmed with red oak with a dull wax finish. It has a paneled wainscoting, parquet flooring, and massive beamed ceiling. The windows are glazed with leaded glass, and a door opens into a conservatory, which is also glazed with leaded glass and provided with a tiled floor and wainscot with the proper drain, etc. The butler's closet, kitchen, and the pantry and rear hall are trimmed with brown ash, and each apartment is fitted up with the very

best modern conveniences. Kitchen has an Adamant wall with tile effect. The second story is trimmed with whitewood and is treated with white enamel, except the den, which is painted black. The den is very attractive, with its black trim and its red walls. Besides the den there are four bedrooms, eight closets, linen closet, and bathroom; stationary lavatories are placed in each room. The bedrooms have oak borders two feet wide and maple center. The bathroom is paved and wainscoted with tile, and is furnished with porcelain fixtures and exposed nickelplated plumbing. The bathtub is of the Standard make and the other fixtures are of the Ronald & Johnson make. The third floor contains two bedrooms and two trunk-rooms. A cemented cellar contains a furnace, coal bins, laundry, etc. Messrs. A. & E. Gariepy, of Brooklyn, N. Y., were the builders. Mr. John J. Petit, architect, 186 Remsen Street, Brooklyn, N. Y..

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A MODEL DWELLING AT GLENSIDE, PA.

A MODEL dwelling, which has been erected for Mr. Wm. T. B. Roberts, at Glenside, Pa., is illustrated on page 32. The underpinning is built of local stone laid up in a rough manner. The building above this underpinning is covered with matched sheathing, good building paper, and shingles. The shingle work is stained a dark, soft brown with Cabot's shingle stain, while the trimmings are painted an ivory white. The roof is shingled and stained a deep red color. Dimensions: Front, 23 ft.; side, 30 ft., exclusive of porch. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. The interior throughout is trimmed with chestnut and finished naturally. The hall contains an ornamental staircase with turned newels, balusters, and rail. The landing is provided with two latticed windows with good effect. The parlor contains a chimney breast provided with a mantel of Colonial design. The dining-room has a similar mantel, and a plate-rack placed six feet from the floor. The kitchen is provided with a dresser, sink, and a Novelty range, made by Abram Cox Stove Co., of Philadelphia. The second floor contains three bedrooms, three closets, linen closet, and a bathroom. This bathroom has a wall treated with white enamel, and is furnished with porcelain fixtures and exposed nickelplated plumbing. There is a cemented cellar under the whole house, which contains a laundry, furnace, and coal bins. The price of this house, including the land and everything complete, ready for occupancy, is \$4,000. Mr. Albert Ellis Yarnall and Mr. E. A. Wilson, associate, of 14 South Broad Street, Philadelphia, Pa., were the architects.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT ALLENHURST, N. J.

THE residence of Russell Benedict, Esq., at Allenhurst, N. J., is shown on page 34. The underpinning is built of brick and coated with Portland cement and marked off in squares. The superstructure above is of wood and the exterior framework is covered with sheathing paper, and then shingles, and then stained a greenish-gray with cream-white trimmings. The blinds are painted light canary yellow. The roof is covered with shingles and finished natural. Dimensions: Front, 43 ft.; side, 40 ft., not including piazza. Height of ceilings: Cellar, 7 ft. 6 in.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The house is planned with a central hall, which is trimmed with pine and treated with enamel white. It contains a broad staircase with newel, formed of a cluster of spindle balusters, the whole rising to a broad landing, provided with a cluster of windows and a paneled seat. The fireplace is built of brick with the hearth and facings of tiles and mantel of special design. The parlor is treated in white enamel and has a bay window with Ionic columns. It is separated from the hall by similar columns. The library has a similar treatment of color and design. It has also an open fireplace built with tiled hearth and facings and mantel. The dining-room is trimmed with cypress and provided with maple floor and an open fireplace. The butler's pantry is provided with butler's bowl, dressers, and cupboards. The kitchen is trimmed with cypress and provided with all the best modern conveniences. The second floor contains a large open hall, four bedrooms, dressing-room, eight large closets, and bathroom furnished with porcelain fixtures and exposed nickelplated plumbing. The walls are enameled and marked off in squares to imitate tiling. The third floor contains two bedrooms and ample storage. A cemented cellar contains laundry, furnace, and other necessary fixtures. The house was designed by Messrs. Child & De Goll, architects, New York City, N. Y., and was built by the Coast Land Improvement Company, of Allenhurst, N. J.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT CHESTNUT HILL, MASS.

THE residence presented on page 35 has recently been erected for Mr. Alfred Townsend Hartwell, at Chestnut Hill, Mass. The underpinning is built of brick. The superstructure is constructed of wood and the exterior framework is covered with matched sheathing, good building paper, and then shingles, which are stained a dark sienna color, while the trimmings are painted cream-white. The roof is shingled and finished natural. Dimensions: Front, 42 ft.; side, 37 ft., exclusive of piazza and porches. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The plan shows a central hall with two wings thrown out at each side containing the living and dining-rooms respectively. The hall is trimmed with pine and is treated with white enamel. It contains an ornamental staircase with turned newel-posts, balusters of white enamel treatment, and a mahogany rail. The ingle nook at the side of the vestibule contains an attractive bay window, seats, and an open fireplace built of Tiffany brick, with the facings and hearth and a mantel of Colonial design. The living-room is trimmed with sycamore and is finished natural, and contains paneled seats, bookcases built in, and also an open fireplace with Roman brick facings and hearth and a mantel. The dining-room is trimmed with white pine and treated with white enamel. The walls have a greenish hue. The butler's pantry, store pantry, kitchen, and rear hall are trimmed with white pine finished natural, and each is fitted up in the best possible manner with the usual conveniences. The second story is treated in white and contains an open hall, four large bedrooms, linen closet, and a bathroom. This bathroom is wainscoted and furnished with porcelain fixtures and exposed nickelplated plumbing. There are three bedrooms and a large trunk-room on the third floor. There is a cellar under the whole of the house containing laundry, a Carpenter furnace, etc. Mr. H. S. Fraser, architect, 8 Exchange Place, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

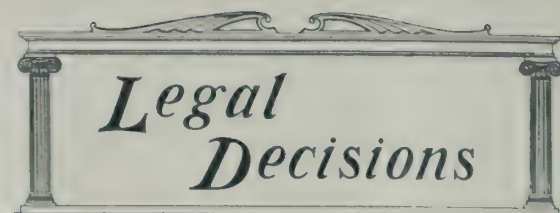
THE ARCHITECT AND THE SMALL HOUSE.

A VERY insignificant number of small dwelling houses are designed by architects, points out the Building News. The profession has no reason to regard this circumstance as a reproach; they must rather congratulate themselves upon it, for the quality of these erections is most unsatisfactory. They have disfigured many of our most beautiful suburbs. The architect may indeed point to our ordinary suburban houses and villas as a striking object-lesson of his non-employment. And yet the fact is very unsatisfactory on other grounds. These buildings are discreditable to art; but what is the reason of the non-employment of the architect? There are, perhaps, these two chief reasons: first, that the design of an ordinary dwelling-house is an easy matter, and that scores of good models can be found; second, that an architect adds to the expense.

If we regard the design of a house as so many rooms with entrances and windows inclosed by outer walls, then truly anybody may become his own architect. It is an easy matter to look over published plans of houses and adopt that which seems most suited to the ideas of the owner. But if it is, as it ought to be, an adaptation to the environment—an evolution of the habits and social tastes of the occupant, in which every room has been arranged with reference to aspect, to use, to physical comfort and taste, and the exterior has been shaped to the requirements—the design can only be made by an architect.

Bad foundations, cracked walls and plaster, insanitary drainage that has to be overhauled on the first appearance of an infectious scare, leaky roofs and gutters, and bad fittings and workmanship everywhere, compel the hapless owner to spend money year after year if he wishes to keep good tenants. As in the case of law or medicine, the man who "becomes his own architect" well deserves the stigma of the old adage. There is another aspect of the case. The builder who contracts to carry out his own plans can not be expected to do so at the same rate as he would submit a tender upon an architect's set of plans. He adds a percentage for his extra trouble, and does not scruple to use his own discretion in the selection of material and labor, which he has a right to do. Thus the supervision of an independent party to the contract is lost sight of. But the public believes this course saves the fees, and are thus put off their guard.

On the other hand, there are circumstances that favor architectural employment. The effect of restrictions on building have no doubt operated in this direction. Building regulations and by-laws, sanitary legislation, and the like have had the effect of bringing people to architects. It is only the professional expert who has any knowledge of the requirements of these regulations, and he is consequently better able to advise his clients and prepare plans than a builder or any uninformed person.



ARCHITECT'S LIST OF EXTRAS AS EVIDENCE.—In assumption to recover for extras furnished under a building contract, a paper prepared by the architect, containing a list of the extras and their value, was properly admitted in evidence in connection with the testimony of the contractor and the architect. *Foster et al. vs. McKeown et al.*, 61 N. E. Rep. (Ill.) 514.

ASSUMPTION OF RISK.—Where plaintiff, a servant of an independent contractor, working on the interior of a house, stepped upon a balcony for his own convenience in calling to a fellow workman below, and the balcony fell by reason of its weakened condition, which was unknown to defendant, the owner of the house, defendant is not liable for the injury to plaintiff resulting therefrom, as plaintiff was not required, expected, or invited to go upon the balcony. *Smith vs. Trimble*, 64 S. W. Rep. (Ky.) 915.

CONSENT OF OWNER TO IMPROVEMENTS.—Where in an executory contract for the sale of land it was agreed that the vendee should erect a building on the lot, and the vendor should advance him a specific sum for its construction, and the vendee went into possession, and employed plaintiff, who furnished labor and material for the building, and the vendor, without notice of plaintiff's employment, paid the agreed sum to the vendee, the plaintiff did not acquire a lien on the premises by virtue of Rev. St., art. 3294, giving a lien to one who furnishes labor or material in the construction of a building under or by virtue of a contract with the owner or his agent, though the owner consented to the erection of the building. *Faber vs. Muir et al.*, 64 S. W. Rep. (Tex.) 938.

COSTS AND ATTORNEY'S FEES.—Under Code Civ. Proc., Sec. 1195, providing that the court must allow, as a part of the costs on foreclosure of a mechanic's lien, the money paid for filing and recording the lien, and reasonable attorney's fees,—such costs and fees to be allowed to lien claimants whose liens are established,—a party establishing a claim is properly allowed such fees and costs where defendant makes no tender of the amount due, or offer to allow judgment for any sum. *Linck vs. Johnson*, 66 Pac. Rep. (Cal.) 674.

CUSTOM AS TO SCAFFOLDING.—Where one employed by contractors for the setting of stone on a brick-vener building was killed by the falling of a scaffold on which he was at work, owing to its defective construction, the fact that there was a custom in the city whereby it was the duty of the persons in charge of the brickwork to construct scaffolds to be used by both the brick masons and the stone setters, of which custom the servant was aware, did not relieve the master from liability, in the absence of anything to show that the servant's contract of employment was made with reference to such custom, or that he waived his right to expect the master to furnish him a safe place to work. *McBeath et al. vs. Rawle*, 61 N. E. Rep. (Ill.) 847.

LIABILITY OF CONTRACTOR FOR NEGLIGENCE.—An employé of a contractor, engaged in erecting a brick wall on a stone wall erected by defendant on a concrete foundation furnished him by the owner of the building about to be erected, was injured by the collapse of the brick wall. The defendant had no knowledge, or any reason to believe, that the foundation was so insecure as to render it unsafe. Held that, in the absence of any evidence of a substantial defect in the stone wall, defendant is not liable. The liability of defendant was limited to defects in his own work, and a refusal so to charge was reversible error. *Cochran vs. Sess et al.*, 61 N. E. Rep. (N. Y.) 639.

LIMIT OF LIEN FOR SERVICES.—Under Rev. St., Sec. 1372, providing that mechanics, material men, contractors, subcontractors, etc., shall have a lien for the value of services rendered, in the absence of a special contract fixing the value of the services, etc., the limit of the lien would be the reasonable value of the services. *Sierra Nevada Lumber Co. vs. Whitmore*. 66 Pac. Rep. (Utah) 779.

ONE IN POSSESSION NOT NECESSARILY THE OWNER.—One in possession of land under a written contract of sale is not the owner thereof within the meaning of Rev. St., art. 3294, giving a lien to one who furnishes labor or material in the construction of a building under or by virtue of a contract with the owner or his agent. *Faber vs. Muir et al.*, 64 S. W. Rep. (Tex.) 938.

TALKS WITH ARCHITECTS.

No. 13.—MR. WILLIAM J. FRYER ON THE NEW TENEMENT HOUSE LAW IN NEW YORK.

ONE of the most important pieces of legislation enacted by the New York legislature of 1901 was the act known as the Tenement House Law, which became a law on April 25 of last year, and which now, with the inauguration of the Tenement House Commission provided in the amended charter of New York, is prominently before the public as one of the most important measures to be met and applied by Mayor Low's administration.

Perhaps no man in New York is better fitted to instruct the public in the practical workings of this law than Mr. William J. Fryer. For fifteen years he has been, as he still is, a member of the Board of Examiners which was created to determine cases of appeal from the decisions of the superintendents of buildings. In addition to his professional work as a consulting architect, he has written many books on the subject of building law, his volume on "The Building Laws of New York City" being a standard work, which has been supplemented by an edition of the Tenement House Law. Since 1880, Mr. Fryer has been a member of every committee that has drafted building laws for the City of New York, laws designated as building laws in former charters, but now termed the building code. He was one of three men designated to form a building law for the former city of Brooklyn, and was chairman of the State Commission to report on building laws for cities. So much of his time has been given to this important subject, and he has been so intimately concerned with so much important legislation relating to it, that Mr. Fryer is to-day the foremost authority on building law in New York, and unquestionably one of the most distinguished experts on this topic in the world.

Mr. Fryer was not concerned with the drafting of the Tenement House Law, but his unusual experience in such matters make him a peculiarly valuable critic of its worth and a keen judge of its shortcomings.

"Is the new law," I asked, "a step in the right direction?"

"Some say yes most emphatically," was the reply; "but the advocates of the law have not always realized that a building law ought to be built gradually. Here is one thing that progress must be slow in; for there are too many interests, too many previous conditions involved, for sudden changes. Yet the Tenement House Law makes it practically impossible to build tenement houses which will give people the same accommodations as before for the same money, or which will even be remunerative to their owners. And this is important because, if there is one thing clearer than another, it is that people will not build unless they can gain a profit from their building operations."

"How is it," I queried, "that the new law reduces the opportunity for profits?"

"It does this in a variety of ways; it reduces the area which may be covered by tenement houses, it requires unnecessary widths of courts, shafts, and the like, and requires an unnecessary area in the rear. This is answering the question in a general way. Take, for example, some of the requirements. A corner house, says the act, must not fill more than 90 per cent. of the area of the lot; another section says that a corner house must have a yard of not less than ten feet. This at once lops off the necessary ten per cent. required by the previous section. But in addition to the yard area there must be further reductions for shafts, so that not even the full 90 per cent. can be built upon after all.

"It is a highly significant fact that, with scarcely more than one or two exceptions, no plans have yet been filed by individuals for new buildings to be built under this law. There must be something radically wrong with building requirements when people suddenly stop building and refuse to begin new undertakings. Even when the new law was about to go into effect there was a less general rush for permits than the total number of plans that would ordinarily have been filed during the ensuing summer months."

"But why build tenement houses at all? If they are as bad as they often are, if they are so bad that an entire new law covering them must be put on the statute books, how can it be a matter of regret that no more are built?"

"That has nothing to do with the case. If building is stopped, the existing houses will become filled to overcrowding, and rents will be advanced. The people who live in tenement houses will not be benefited. They will lose the value that competition gives in building and which, in many cases, has brought material betterments to the tenements, and the landlords will reap the full advantage of the new conditions.

"Another strange thing in connection with the new law is that it makes no distinction between apartment houses and tenement houses. It reiterates the old definitions of tenement houses which have existed for thirty or forty years, and which were made long before the modern apartment house was de-

veloped as a distinct type of building. It is true we have been told that the projectors of the law claimed they could not differentiate; but most observing folk are able to distinguish between the two groups of structures, and it certainly would have been wiser to have attempted to distinguish between them. Very grave complications and much unnecessary hardship is likely to result from considering these widely different types of buildings as one.

"The new law was intended to prohibit the erection of a tenement house on a single lot. That can still be done, if the requirements specified in the law are followed. But people who understand business are not likely to do so because such buildings can not successfully compete with existing structures. It has, strangely enough, and as a direct result of these limitations, actually decreased the value of land in New York available for tenement houses and apartment houses.

"The new law practically limits fireproof structures to seven stories. If a building is not fireproof, and is under forty feet in width, it may be five stories in height; if it is more than forty feet wide, it may be six stories high. Now let me show you some of the practical workings of these requirements. The new law was, it may be supposed, drafted so as to extend the number of fireproof buildings in the city; as a matter of fact, it distinctly discourages fireproofing. On a sixty foot street you can build a non-fireproof tenement six stories in height if the width of the building exceeds more than forty feet. If the structure is fireproof, and of the same size, you can build it seven stories higher and no more. But fireproof construction is much more costly than non-fireproof construction, and the additional rental from the single additional story you are permitted to build will not be an adequate return on the increased cost of the whole structure. So far from encouraging fireproofing, therefore, the law practically puts a premium on non-fireproof construction.

"Now see how it affects the area available for building. A building five stories high must have a back yard, stretching full across the lot, of twelve feet depth; that is the starting point. For each additional story above five you must add one foot to the depth of your yard. A six-story house must therefore have a back yard thirteen feet deep, and a seven-story house one fourteen feet deep.

"Let us apply these rules to structures on wider streets. A tenement house can be built to a height one third greater than the width of the street on which it faces. On a hundred foot street you can build a house one hundred and thirty-three feet high; let us say twelve stories. This is seven more stories than our first house of five stories, and requires a back yard of nineteen feet depth. On a street one hundred and fifty feet wide you can build two hundred feet high, say eighteen stories. These conditions are likely to be obtained only under unusual circumstances, perhaps only on the upper boulevard, and the building is likely to be a high-priced apartment house. But this is thirteen stories higher than the initial house, and must have a back yard of twenty-five feet."

"So that," I remarked, "if you kept on you would be all yard and no house?"

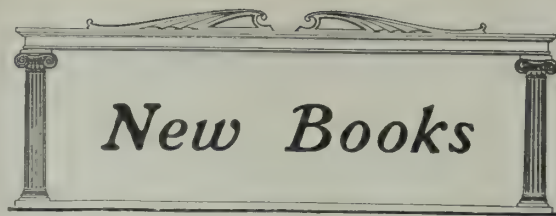
"Precisely; but there is more to come," continued Mr. Fryer. "The restrictions of the back yard are only a part of the total deductions in area necessitated by the new law. The law requires two sorts of courts, outer and inner courts. Outer courts open into the back yard, while inner courts are wholly surrounded by the building, or at least have no connections with the outer area. The outer courts are required to be at least six feet in width, and for each story above five, six inches must be added to their width for each story. If there are two of these courts, as is likely to be the case in a large tenement house, this means you must deduct, in the first place, six feet from each side, or twelve feet in all, and deduct one foot for each story above five.

"The inner courts must start with a width of twelve feet and be at least twenty-four feet long; for every twelve foot of increase or fraction thereof in the height of the building, you must deduct still further six inches in width and one foot in length for the entire height of the court. The law was devised from a purely philanthropic point of view, and the interests of the owner and the builder were ignored in it."

"What do you think will be its effect on existing buildings?"

"The law is confiscatory in its requirements, and the difficulties it presents must, sooner or later, be passed on by the courts. This will unquestionably result in throwing out all its conditions deemed unconstitutional. In certain senses it is retroactive, and essentially unconstitutional in requiring changes in buildings which were erected in accordance with laws in force at the time at which they were built. And it happens that most buildings affected by this law have good records both for health and morality."

BARR FERREE.



New Books

THE ART OF BUILDING A HOME. A Collection of Lectures and Illustrations by Barry Parker and Raymond Unwin. Longmans, Green & Co., London, New York, and Bombay. 1901. Pp. 133, plates 68. Price, \$3.75.

This interesting and instructive volume deserves a much wider circulation than it is likely to have owing to its somewhat high price. It is true the half-tone illustrations are numerous, and therefore costly, and the whole volume an admirable example of modern book making; and it is further true that the ideas and suggestions contained within it are worth, some of them, many times its price; and yet, its cost is high and its circulation is likely, therefore, not to be as wide as it merits. Several of the chapters on certain abstruse problems in art seem somewhat out of place in a book devoted primarily to house building, but they were doubtless inserted to further elucidate the ideas of the authors. The introductory chapter on the Smaller Middle-Class House, and the chapters on Building and Natural Beauty, on Co-operation in Building, and on the Art of Designing Small Houses and Cottages, are richly suggestive, and not less useful in America because the authors are English architects writing chiefly for English readers and mostly concerned with English conditions. The illustrations, which are of somewhat unequal merit, are good examples, on the whole, of very recent English work in interior design and decoration.

The general point of view of the book is well summed up in the introduction: "Let us have in our houses," write the authors, "rooms where there shall be space to carry on the business of life freely and with pleasure, with furniture made for use; rooms where a drop of water spilled is not fatal; where the life of a child is not made a burden to it by unnecessary restraint; plain, simple, and ungarnished, if necessary, but honest. Let us have such ornament as we do have really beautiful and wrought by hand, carving, wrought metal, embroidery, painting, something which it has given pleasure to the producer to create, and which shows this in every line—the only possible work of art. Let us call in the artist (*sic*), bid him leave his easel pictures, and paint on our walls and over the chimney corner landscapes and scenes which shall speak of nature, purity, and truth; shall become part of the room, of the walls on which they are painted, and of the lives of us who live beside them. . . . Let us have rooms which once decorated are always decorated, rooms fit to be homes in the fullest poetry of the name; in which no artificiality need momentarily force us to feel shame for things of which we know there is nothing to be ashamed.

OLD TIME GARDENS. Newly set forth by Alice Morse Earle. A Book of the Sweet of the Year. New York: The Macmillan Co. 1901. Pp. lxviii, 489. Price, \$2.50 net.

This delightful book is one of the most fascinating and charming that Mrs. Earle has added to her long series of valuable studies of Colonial times and manners. But it is more than a record of gardens past and gone and of ancient garden craft and lore. It does, indeed, deal with old time gardens, but it is a book of present interest, heaped with suggestions to the maker of gardens to-day and brimful of strange and curious information, nowhere else garnered so gracefully nor systematized with so much loving skill and care.

The old time garden, like the old time house, is still with us, and survives in many places, small and large. Old-fashioned flowers have not yet gone so completely out of fashion that their quaint, old time beauty no longer exists or is without its admirers. It will be strange if Mrs. Earle's book, with its many illustrations and broadly covered subjects, does not help on the vogue of the old time flower as no other publication has done. She begins her book with a general review of some of the more important genuine Colonial gardens still remaining, gardens that have come down from Colonial times practically as they were planned and planted. Then special chapters in quick succession recall to the reader many special characteristics of gardens, much of which still survive in more or less complete form. Chapters on the Front Dooryard, Box Edging, the Herb Garden, the Local Tide, Gardens of the Poets, the Blue Flower Border, Garden Furnishings, Garden Boundaries, and other titles are as suggestive in name as they are delightful in treatment under the keen, observing mind of our author. The book is a fine record of a most fascinating art, and every page gives evidence of a fine appreciation of the subjects treated. It is a book to be warmly commended to every garden lover.

Garden Notes

AN ORCHARD OF BEAUTY.

CAN an orchard be made a spot of beauty, or must it be given up wholly to the growing of trees? An English writer has recently described an orchard which was at once beautiful as well as thoroughly stocked with fruit trees. The suggestion is an interesting one, and well worth reproduction:

The orchard is not more than an acre in extent, and circular, while round it runs an iron fence three feet high, the upper six inches or more curved slightly inward. This is covered by espalier fruit trees—apples, pears, plums, and cherries—grown over it so thickly that, the trees being planted on the outer side of the fence, the ironwork of the fence is completely hidden by their foliage from that side. On the outer side of the fence is a flower border about a foot wide, which is very gay in spring with bulbs and other low-growing spring flowers, and in summer is hidden by the growth of the fruit trees. By this border runs a strip of turf a foot and a half to two feet wide, so that the machine can run comfortably along it, and outside this turf is a gravel path.

Inside the espalier fence is another flower border, three to four feet wide, running right round, where such great quantities of hardy flowers are grown that they supply the house with cut flowers in profusion for months without any apparent loss. Here in the spring are wallflowers by the hundred—Golden Queen, Blood Red, and all mixed strains between these two extremes; Lenten roses in their various shades of green, pink, and purple; great masses of old-fashioned columbines, both the single and the double, as well as the more recent long-spurred varieties; carpets of delicious pinks, both single and double; clumps of tulips, a dozen in a clump, some of them 'deep tulips dashed with fiery dew'; and, as spring merges into the full glory of summer, giant foxgloves luxuriating in their native element; big plants of the lovely old Canterbury bells as big as gooseberry bushes, as well as the new *Calycanthemum media* varieties; and conspicuous among its glossy foliage the starlike flowers of the Rose of Sharon (*Hypericum calycinum*). In the latter part of the summer the continuous absorption of moisture by the surrounding trees makes this border too dry for such a profusion and variety of flowers, but some things do well even then, when the drought is not too prolonged, such as the tall snapdragons, evening primroses, red valerian, and the Michaelmas daisies.

The whole surface of the orchard inside the circle of the flower border is grass, except within a radius of a foot from the stem of each tree. The trees, not being more than twelve or fifteen feet high, do not yet make very much shade, but, however much shade there might be, the grass itself would doubtless still be, as it now is, a vision of beauty in March and April with bulbs. In early February the turf display begins with a few clumps of snowdrops. A little patch of *chionodoxa*, or Glory of the Snow, too, at the same time, makes a welcome break of color. But the real glory of the orchard begins when the crocuses come out in the grass during the latter part of February, looking as natural as the grass itself, and reaches its climax in the beginning of April, when the old-fashioned daffodils and many other narcissi, as well as the modest little squills, are in their full beauty. Most of the narcissus tribe will do as well in the grass as in ordinary garden soil, and many will do much better, increasing by division of bulb, and by seeding, to an amazing extent. N. Johnstoni Queen of Spain and N. King of Spain, two similar kinds discovered in Spain, and two of the most lovely daffodils, planted in this way as single bulbs, become clumps of half-a-dozen in as many years by bulb division alone. And this is what they have done in this orchard, and other sorts also to no less an extent, including N. poeticus (Pheasant's Eye), N. John Horsfield, N. Emperor, and N. Moschatus of Haworth (snow-white), not forgetting the humble but beautiful little English Lent lily, which, by-the-bye, will not thrive anywhere but in grass, two years in garden soil generally putting an end to its flowering, though the leaves will remain. The grass is not grazed by animals, but left for hay—a path being kept mown the width of the machine round the inside flower border—so that the leaves of the bulbs die away naturally, and by the time the hay is ready to cut the leaves have so shriveled up and fallen to the ground that they do not affect the quality of the hay at all.

OUTDOOR ART.—Public parks and playgrounds, open squares, bits of grass and flower-beds, are the great object lesson for the people. Watch the men and boys noting the growth of early flowers.

Sanitation

That ordinary household cleaning can not be accomplished by the use of the yard or the roof was shown in a singular manner in Brooklyn a few months ago, where a lady was arrested for causing the beating of her rugs in her yard on a Sunday. It is true that certain political difficulties between the lady's own household and that of her immediately adjoining neighbor, who happened to be a political personage of very great distinction, may have had somewhat to do with this unlooked-for result; but it is nevertheless a fact that only too frequently the back yard and the roof are made the scene of household cleaning that must be and is highly objectionable to the neighbors. It seems a very simple matter for the household immediately concerned to take a dusty article out of doors and clean it with a vigorous beating or sweeping; but easy as this is to do, it may entail annoyances and inconveniences upon the neighbors to which they should not be subjected.

When it comes to dusting, there is a very general disregard of the rights and convenience of one's immediate surroundings. There is a very solemn and ungracious ceremony practised in every parlor car of every railroad as it nears its principal destination. This consists of a general brushing off of thoughtless passengers by the negro attendant. The passenger gets out into the aisle and is vigorously groomed by the porter, with a wide dissemination of dust that is not the less annoying and dangerous because it may be invisible. If the people who are dusted would but think for a moment, they would realize that the dust germs from their own garments must immediately find rest on those of the other occupants of the car; and that they, in their turn, will receive back their own when the next man is dusted, together with an additional supply of his. The suppression of car dusting is one of the simple little things that would help to make life more wholesome and which may be easily remedied by the intelligent public.

The proposal for free water for the inhabitants of cities has been made by the mayor of Fargo, South Dakota, although the first proposal of this nature originated with the late Hazen S. Pingree. The time may indeed come when every American citizen will be fed with the golden spoon administered by a public official who will supply both the spoon and the food—the old Romans came pretty close to this—but there seems no immediate likelihood of a movement for free water gathering national strength. It would be utterly impossible to control the waste of water, and the cost of obtaining sufficient pure water for any large city would place fresh and exhausting burdens upon the taxpayers. It would seem as though these two practical objections must be fatal to the carrying out of such a scheme.

A strong odor of gas in a room should be the immediate signal for turning off all the lights and opening the windows. There are few things more dangerous than to carry a light into a room whose air is saturated with gas; and the very first step should be to cut off the supply, even if it must be done at the meter. Then, after the fresh air has dissipated the odor, it will be proper to investigate the cause of the leak and take steps for remedying it.

The American consul at Brunswick has recently sent into the State Department an interesting report on heating and plumbing in Germany. Improved methods of steam or hot water heating sanitary plumbing and elevators, he states, have not been widely adopted in Central and North Germany. South Germany is said to be more advanced. In Brunswick there are a large number of hotels, but only one boasts of an elevator and steam-heaters. Last year steam heating was introduced for the first time in four newly-built houses, and the apparatus was furnished by an American firm. The people still adhere to the old system of heating by "Kachelofen," or stoves encased in tiles. These huge arrangements, standing in the corner of a room, look as they would heat a whole house, but when their modest iron interior is examined it is apparent that they do not suffice to heat a room. There is no word in the German language for furnace, and this method of heating is known here as "central heizung," or central heating. Lately there has been introduced in a new flat a method of heating through steam or hot water, the apparatus standing in the hall or corridor of each story. It had not been tested at the time of the report. Most people in Germany live in flats.

Household Notes

ORIENTAL stuffs and decorations in great variety, points out the New York Tribune, offer themselves for the cozy corner. East Indian wares are desirable in this connection, and the Northwestern Indians of America furnish original material also for this purpose. The use of arms and armor for cozy corners is not practicable for many people. The expense places them beyond the reach of any but a well filled purse. As a substitute, there have lately been made some excellent reproductions in papier mâché that meet these two difficulties in a practical way. They are light in weight, inexpensive, and the finish of bright or antique polish is guaranteed not to peel, chip or break. The pieces intended for wall decoration are, in fact, so light that they may be hung by a small tack or pin. Their cleanliness is assured, as they may be dusted with a damp cloth.

The home is as important in the tenement house region as in less crowded and more desirable parts of great cities. In a recent conference in New York the Rev. R. L. Paddock, vicar of the Pro-Cathedral in New York, and a clergyman thoroughly familiar with tenement conditions, pointed out that the poor people's rights included houses decent enough for human beings to live in; rooms with sun enough to provide sufficient light and warmth; windows, shafts and courtyards large enough to admit sufficient air for the preservation of health. As things are now, he declared, there is no chance for a child of the slums to grow up healthy and strong in body or for the uplift of the poor little soul. As other things to be considered he suggested more bathhouses, a great many more libraries and reading-rooms and in each of the last named buildings a big, light room with a fireplace, where men can smoke and read; gymnasiums and many more settlements in which attention is given to body, mind and soul. He was astonished that with time, money and talent so few give their lives to work for their fellow men.

A new use for India shawls is being developed in their application for draperies and decorations. They are now difficult to obtain in the shops and are seldom worn, but they make highly effective decorations. In an uptown studio of some note, says a New York paper, the attention of every visitor is attracted to a very beautiful specimen draped against the light at a high window, with a result of colors almost kaleidoscopic and far more beautiful. In the same room a couch is covered with another variety of shawl, and an easel is draped with a third. In each case the shawl was bought by the artist for a mere song from an owner entirely ignorant of its artistic possibilities, but quite willing to pander to what she considered the eccentricities of genius. In one handsome house not far from the avenue is an Oriental room which is the delight of all who see it. Its most noticeable feature is a cozy corner draped and canopied entirely with India shawls, each at one period of its career worth at least \$1,000. Two or three great easy chairs in the same room are covered with India shawls and the portières guarding the entrance are also of shawls. Indeed, in the rôle of portière the India shawl is seen at its best, although every variety of the once fashionable garment is to be seen at the present time in many of the handsomest dwellings in this city, covering couches, chairs, pianos and tables. The shawl most often metamorphosed into a table cover is the variety with a perfectly plain black center bordered to a depth of nine or ten inches with richly tinted, and at the same time harmoniously subdued, colors, produced nowhere so satisfactorily as in the East, nor in quite such artistic patterns as are to be found in the India shawl.

The only public laundry in the country is said to be that connected with the public baths on Gaskell and Leithgow streets, Philadelphia. For five cents an hour one may have tubs, hot and cold water, soap, wringers, steam driers and irons. There many women take their family washing, and a curious fact is the frequent use of the laundry made by men, so that it has become necessary to set apart Friday and Saturday for them. Men who have only one suit of under-clothing and one shirt can in an hour wash, dry and even iron them, and many come regularly every week. A room is given them in the men's bathing department, where they remove the underclothing, slip on the outer clothing and proceed to do their washing.

New Building Patents

THE following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY by MUNN & Co., Solicitors of American and Foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

ROOFING TILE.	G. P. Heinz, Chicago, Ill.	December 10	688,641
TILE.	J. K. Sierer, New York, N. Y.	December 10	Design 35,436, 35,437
BUILDING BLOCK.	S. T. Trumbull, Gloucester, Mass.	December 24	689,523

CARPENTRY.

WINDOW.	W. C. Roger, Chicago, Ill.	December 3	687,788
WINDOW.	A. O. H. Lehmann, St. Louis, Mo.	December 10	688,532
WINDOW.	E. B. Jacques, Denver, Col.	December 10	688,737
MANTEL.	C. L. Weyant, New York, N. Y.	December 10	688,764
WINDOW.	J. Caesar, Perth Amboy, N. J.	December 17	689,162
WEATHER STRIP.	C. Vose, Brooklyn, N. Y.	December 17	689,373
DOOR SUPPORT.	J. Goeller, Fairbury, Neb.	December 24	689,714
WINDOW.	A. S. J. Haygood, Las Cruces, N. Mex.	December 24	689,802

CONSTRUCTION.

CORNER PLASTER SUPPORTING STRIP.	J. Koch, Jr., Brookline, Mass.	December 3	688,181
SLIDING AND FOLDING PARTITION.	W. B. Butterfield, Detroit, Mich.	December 10	688,590
COLUMN.	J. W. De Walt, Homestead, Pa.	December 10	688,603
GREENHOUSE, CONSERVATORY, AND OTHER GLASS STRUCTURE.	W. Selton, Jersey City, N. J.	December 17	689,134
EAVES-ROUGH HANGER.	F. L. Burch, Bowling Green, Ky.	December 24	689,385
PARTITION OR WALL.	H. E. Sharp, Hartford, Conn.	December 24	689,424
STRAIGHT CEILING CONSTRUCTION.	C. Lorence, Weinberge, Austria-Hungary.	December 24	689,554
EXPANDED METAL STRUCTURE.	C. B. White, New York, N. Y.	December 31	689,938
METHOD OF CONSTRUCTING POCKETS IN WALL STRUCTURES FOR SLIDING DOORS OR WINDOWS.	D. Schuyler, Los Angeles, Cal.	December 31	690,081
FLOOR AND CEILING CONSTRUCTION.	J. Schratweiser, Brooklyn, N. Y.	December 31	690,193

ELEVATORS.

ELEVATOR.	J. C. Dean, Herold, W. Va.	December 10	688,601
ELEVATOR.	L. C. Babcock, Brooklyn, N. Y.	December 17	688,983
ELEVATOR.	M. E. Neenan, New York, N. Y.	December 24	689,509, 689,510

FIREPROOFING, FIRE-EXTINGUISHMENT.

FIREPROOF ROOF.	E. L. Heidenreich, Chicago, Ill.	December 17	689,081
FIRE EXTINGUISHER.	R. O. Jones, Peoria, Ill.	December 24	689,548
BURGLAR AND FIRE ALARM.	L. H. Williams, New York, N. Y.	December 24	689,698
FIRE ALARM.	Hausen & Harrison, Evanston, Ill.	December 24	689,817
FIREPROOF DOOR OR BLIND.	W. R. Kinnear, Columbus, Ohio.	December 31	689,974
ELECTRIC FIRE ALARM.	Thompson & Midgley, Buffalo, N. Y.	December 31	690,040

HARDWARE.

LOCK.	F. H. Mills, Klamath Falls, Ore.	December 3	688,001
SASH FASTENER.	H. L. Norton, Middletown, Conn.	December 3	688,003
WINDOW LOCK AND REGULATOR.	W. H. Hooper, Torrington, Conn.	December 3	688,089
BOLT FOR LOCKING WINDOWS.	C. C. Sigler, Cleveland, Ohio.	December 10	688,491
LOCK AND LATCH.	J. Couture, Montreal, Canada.	December 17	688,933, 688,934
SPRING HINGE.	C. S. Locke, Joliet, Ill.	December 17	688,957
GRAVITY LOCK.	J. L. Garlside, Paterson, N. J.	December 17	689,177
HINGE.	W. Koester, Chicago, Ill.	December 17	689,201
WINDOW SASH ATTACHMENT.	I. E. Tranter, Franklin, Ind.	December 17	689,249
COMBINED SASH PULL AND SAFETY GUARD.	F. A. Chandler, Boston, Mass.	December 17	689,287
LATCH.	W. H. Taylor, Stamford, Conn.	December 17	689,334
LOCK.	F. P. Keenan, Portland, Ore.	December 24	689,809
COMBINED LOCK AND LATCH.	A. B. Fergusson, Mt. Vernon, N. Y.	December 24	Reissue 11,959
LOCK.	F. L. Enquist, Stockholm, Sweden.	December 31	690,050
SASH FASTENER.	E. A. Hills, Wethersfield, Conn.	December 31	690,056

HEATING AND VENTILATION.

RADIATOR.	F. S. Baker, Toronto, Canada.	December 31	689,844
METALLIC HEARTH PLATE FOR FIREPLACES.	W. L. Dennis, Birmingham, England.	December 31	689,952
SHEET METAL RADIATOR.	C. Phelps, Oskaloosa, Iowa.	December 31	689,986
HEATING AND VENTILATION FOR BUILDINGS.	G. H. Ennis, Troy, N. Y.	December 31	690,252

MISCELLANEOUS.

SCAFFOLD SUPPORT.	S. S. Forry, Freeport, Ill.	December 10	688,623
HOUSE MOVING DEVICE.	C. McDonner, Appleton, Wis.	December 17	689,363
SCAFFOLD BRACKET.	F. Ewing, Buffalo, N. Y.	December 24	689,390

PLUMBING.

WATER CLOSET.	S. C. Brown, Saratoga Springs, N. Y.	December 3	688,234
WATER CLOSET TANK.	Cooper & Dorricott, Philadelphia, Pa.	December 10	688,720
FLUSH TANKS AND MEANS FOR OPERATION OF SAME.	F. and F. H. Engelhard, Springfield, Mass.	December 17	688,942

PLUMBERS' FITTING.	Fruin & Walker, Chicago, Ill.	December 17	689,045
WATER CLOSET.	Reid & Gammann, Brooklyn, N. Y.	December 17	689,125
WATER CLOSET.	W. H. Lloyd, Boston, Mass.	December 24	689,679
DRAIN BOARD FOR SINKS.	Hammann & Hooper, Rutherford, N. J.	December 24	689,717
FLUSHING TANK.	J. W. Snider, New Orleans, La.	December 24	689,759

TOOLS.

CARPENTERS' CLAMP.	J. O. Jeffres, Horace, Neb.	December 3	688,177
PLANE.	S. R. & A. E. Rust, Pine Meadow, Conn.	December 17	688,969
CARPENTERS' FLOOR VISE.	W. J. Young, Denver, Col.	December 17	689,376
STONE MASONS' HAMMER.	A. Gade, Drossen, Germany.	December 24	689,481
SCREW DRIVER AND HOLDER.	T. Hoover, Detroit, Mich.	December 24	689,722

Publishers' Department

ACETYLENE GAS.

ACETYLENE is suitable for the lighting of any building or group of buildings. Especially is this the case in localities remote from municipal lighting plants, and owing to its very superior quality as an illuminant and its economy and convenience, it is rapidly coming into more general use even in the larger towns and cities.

Those who in its early days gave the subject only superficial examination and brushed it aside as a fleeting and temporary novelty may be surprised to learn of its rapid and substantial growth, a growth reached from the improvements made in the methods of generation and the correction of the popular but erroneous impression that acetylene is more dangerous than other forms of lighting.

The truth regarding the danger of acetylene is that it is the same as any other illuminating gas in respect to accidents, carelessness, etc. The way to get an explosion with acetylene or any other illuminating gas—and the only way—is to mix it with air in definite proportions in a confined space and then to ignite it. This need never occur in practice, and statistics show that the damage to life and property is much less in proportion with acetylene than with any of the other methods of lighting commonly employed, and no accidents have happened with acetylene gas that would not have occurred with any other illuminating gas under the same conditions.

Acetylene is conducted through the same systems of piping and fixtures as other gases, except that special burners are required; therefore the same pipes that have been used for other gas need not be changed, and every owner of a new building should take the precaution to have the building piped before completion, whether the immediate installation of an acetylene plant is contemplated or not. Acetylene has no deleterious effect on piping or fixtures. It may be conducted through pipes any distance and may be measured through meters the same as any other gas.

Acetylene costs more per thousand feet than other illuminating gases, but its illuminating qualities are so great that one-half cubic foot per hour (yielding 25 candle power) is equal in illuminating effect to two ordinary gas jets consuming 5 to 6 cubic feet each, or to two incandescent electric bulbs, and candle power for candle power (the only fair comparison), acetylene is the most economical method of illumination.

For convenience it is common to estimate that one burner consuming one-half cubic foot of acetylene is sufficient to illuminate 100 square feet of floor space; in using this as a basis, the character and coloring of the surroundings should be taken into consideration, also the height of burners from the floor.

The Insurance and Police Regulations of Berlin, Germany, say: "The gas must be generated by the gradual addition of carbide to a large excess of water and not by adding water to carbide."

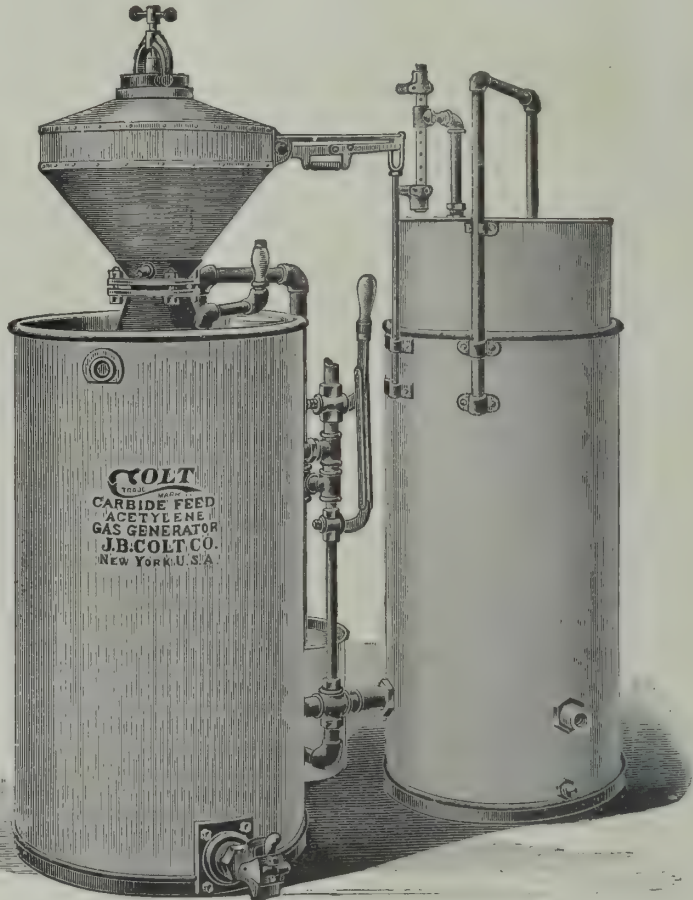
This method is the most economical in the production of gas. It avoids waste and the necessity of a large storage gasometer, and thereby secures the greatest economy in construction, in transportation and space in buildings installed.

The cut shows one of the most popular models of generators manufactured by the J. B. Colt Co., 21 Barclay Street, New York city. It is of the carbide feed type recommended by Prof. Pond, of the Pennsylv-

vania State College, and other disinterested experts. This firm was given the highest award, a gold medal, at the recent Pan-American Exposition at Buffalo. Besides the "Colt" and "Criterion" acetylene gas generators, the company make stereopticons, magic lanterns, electric arc lamps, etc.

STEEL ROLLING DOORS, SHUTTERS, AND PARTITIONS.

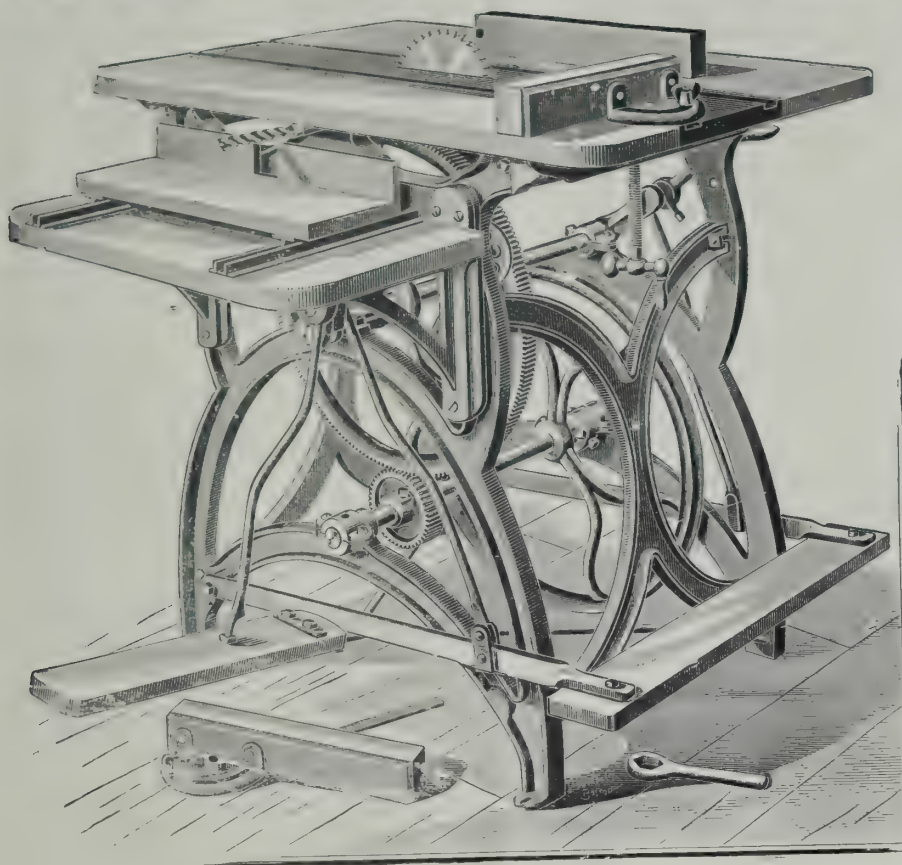
THE Kinnear Manufacturing Co., of Columbus, Ohio, have issued an illustrated catalogue. It shows specimens of their doors, shutters, and partitions, in plants, buildings, etc., enumerates the important concerns that use them, and the wide range of country over which their business extends. Very careful and prolonged study, together with vast experience, has been needed to enable the firm to place on the market such excellent devices. Compact construction, durability, and ease of operation are plainly demonstrated in these illustrations. The ability of the factory to furnish any size of door, etc., is indicated by the fact that it made a single door, covering an opening thirty-five feet six inches wide by twenty feet high for the car-house, at Worcester, Mass. This is the largest of its kind ever constructed, and weighs approximately seven thousand pounds. The car-house of the Boston Elevated Railway is equipped with twenty-two Kinnear car-house doors, one with a side-swinging hinge-post forty feet wide by sixteen feet high. A fine double door, twenty-eight feet high, is at the Ocean pier of the Pennsylvania R.R., in New York City. This opening is used for the passage of a large crane for



COLT ACETYLENE GAS GENERATOR—MODEL J.

loading and unloading vessels. It can be easily and speedily operated by a ten-year-old boy. The great freight station of the B. & O. R.R., at Baltimore, Md., is entirely enclosed with these doors, comprising seventy-one steel rollers of uniform size. In the Baldwin Locomotive Works, in Philadelphia, the tanking building has nine. The end openings are forty-two feet wide, and each opening is enclosed with two doors having a hinged post in the center, which swings sideways or in the line of the coil. The freight-house of the Soo Railway, in Minneapolis, contains sixty-four doors of an arrangement in which the chain hoists are omitted. They prove the ease of operation in all the constructions of this company. A number of interior openings in the Art Institute Building, Chicago, are equipped with rolling doors, and the artistic effect is excellent. A splendid business block in Guadalajara, Mexico, has the shutters applied on the outside. They can be built in the transom bar, if the construction so require, and can be arranged to operate from the interior. In fire shutters the automatic is the most desirable for outside exposures. It is always kept open. But in case of fire it will close instantly at one hundred and fifty degrees of heat. The action is prompt and sure. The firm also make the Kinnear Trolley Wire Connection, which is especially provided for use in conjunction with car-house doors. With the door at any position the current in the wire is uninterrupted, and when the door is up it automatically gives an excellent trolley service.

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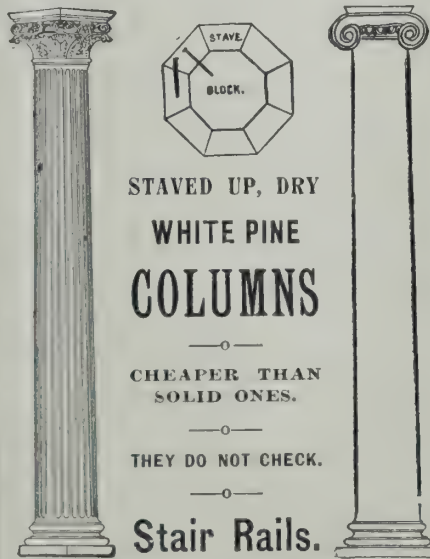
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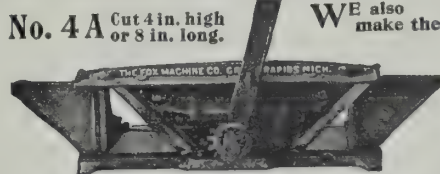
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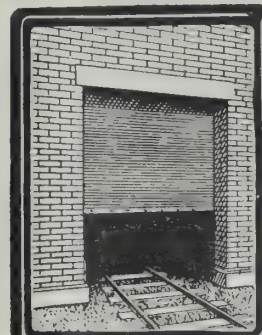
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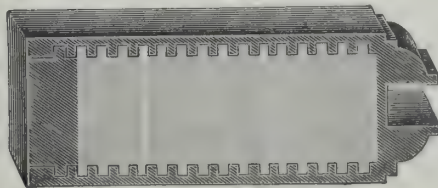
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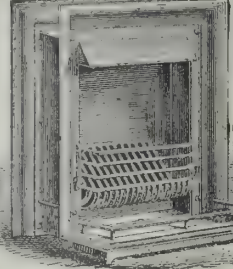
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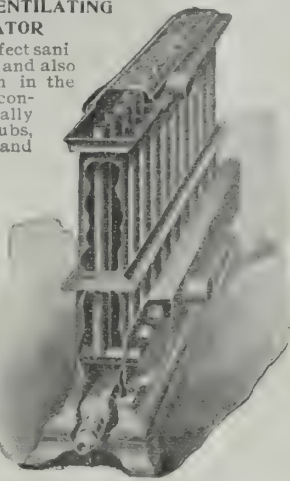
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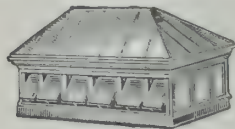
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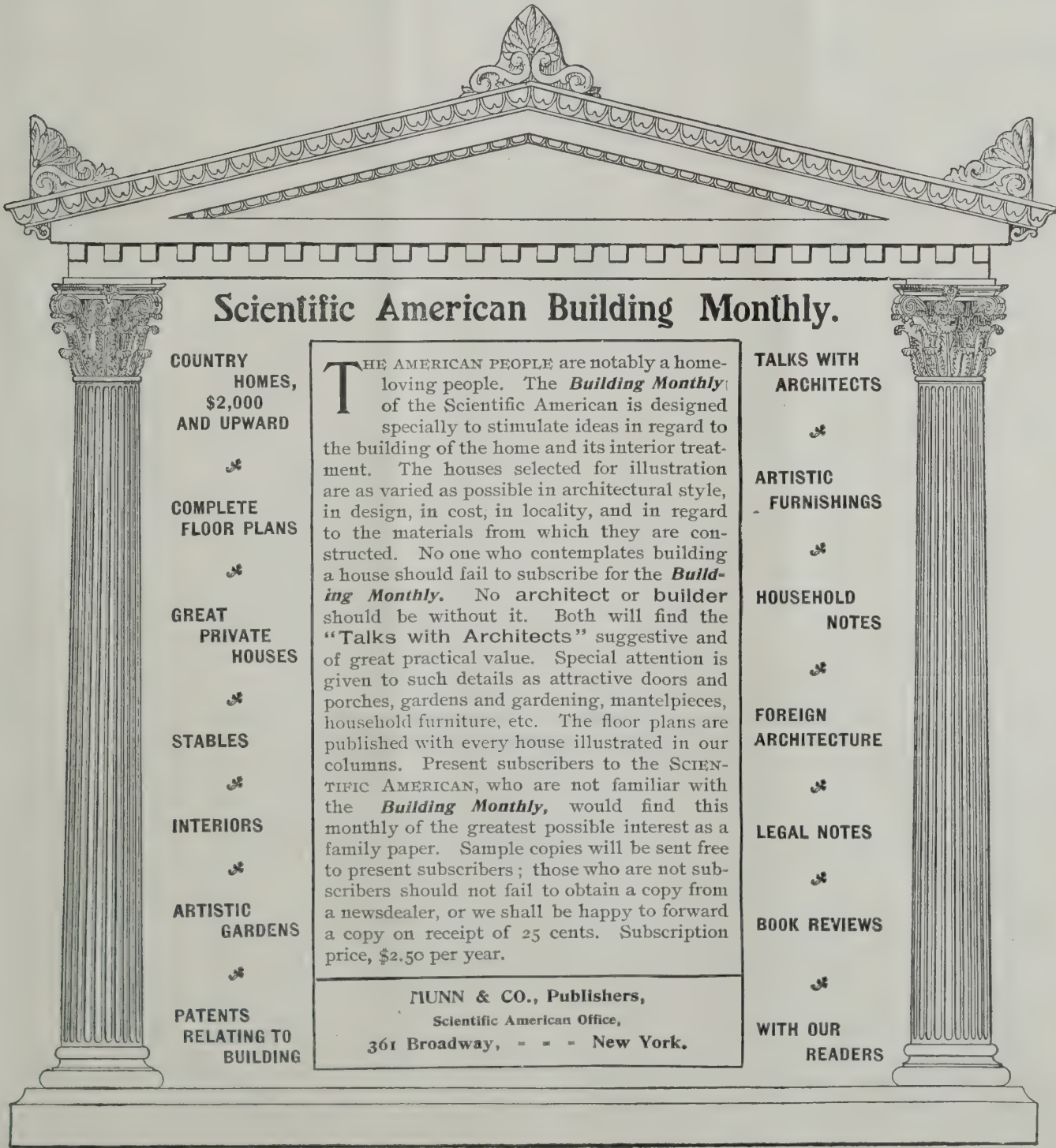
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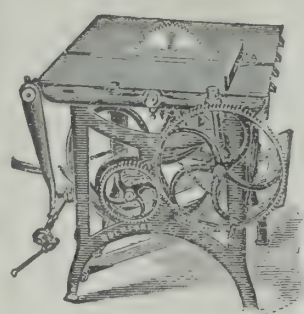
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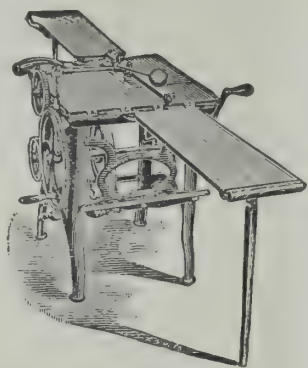
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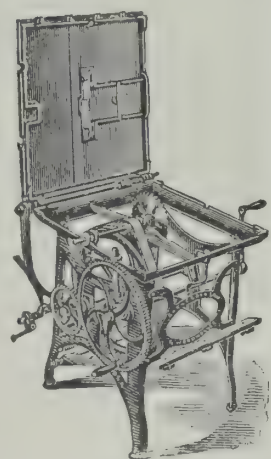
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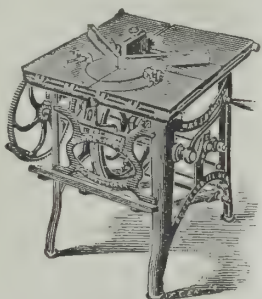
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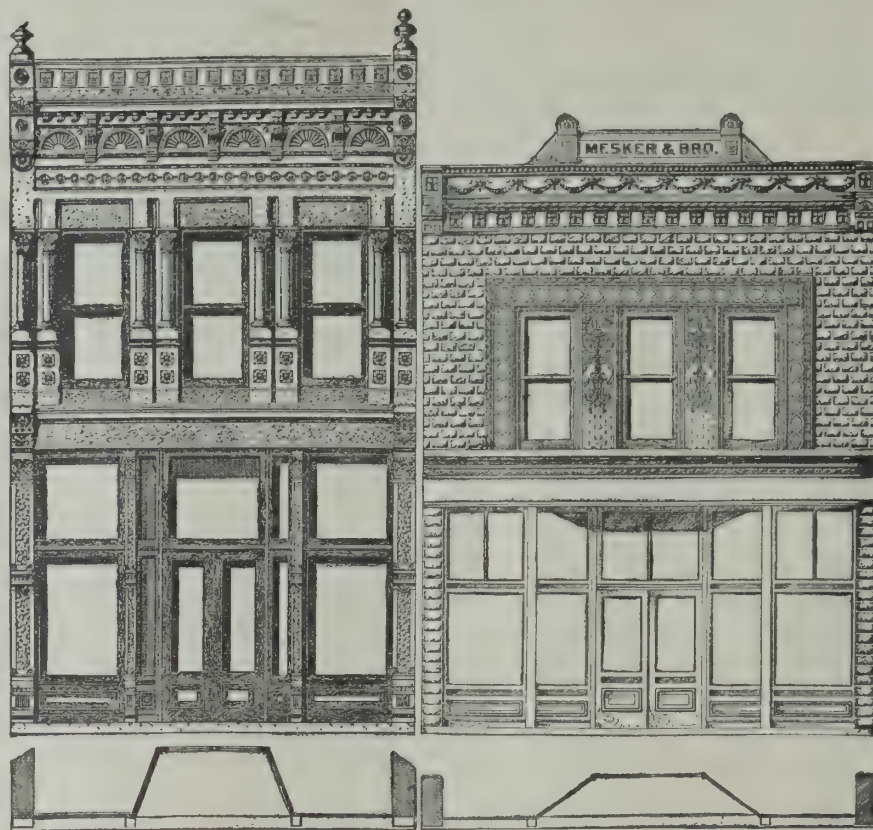
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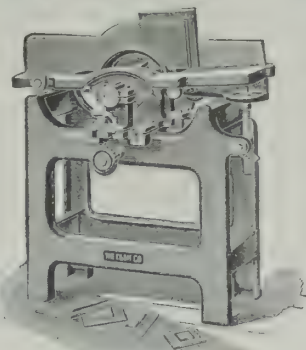
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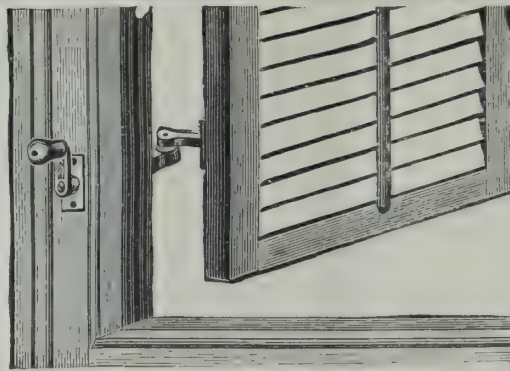
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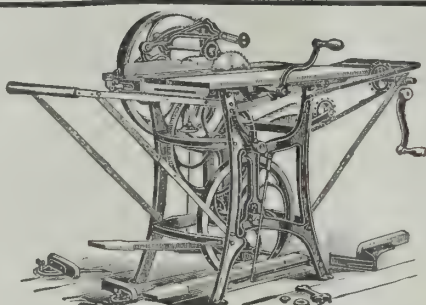
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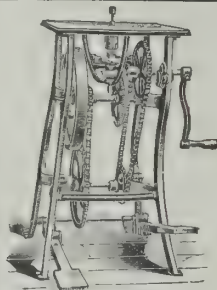
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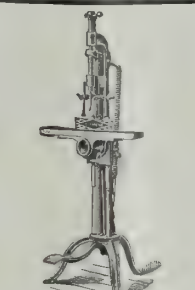
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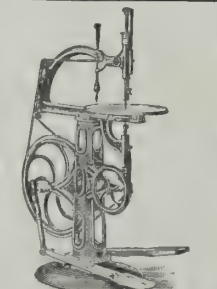
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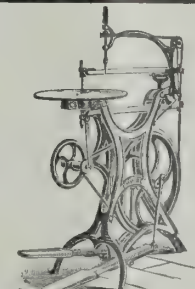
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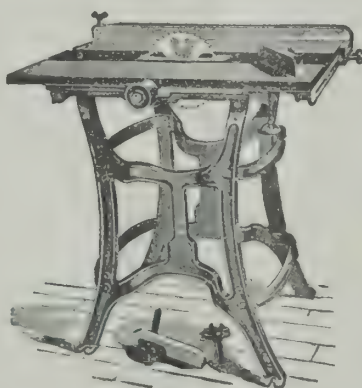
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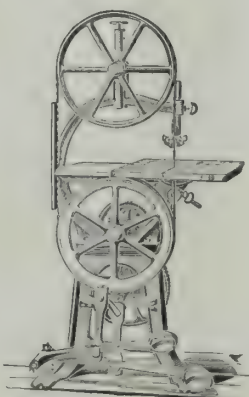
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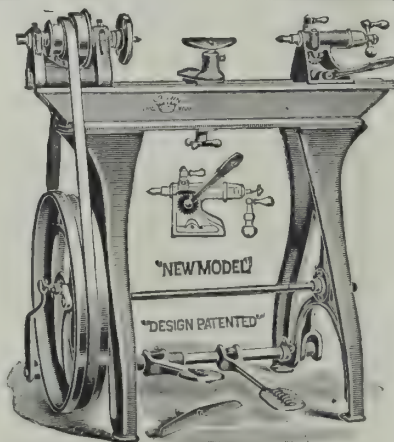
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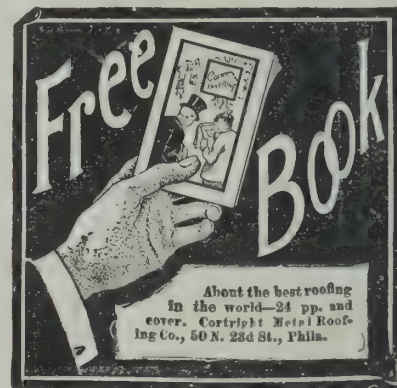


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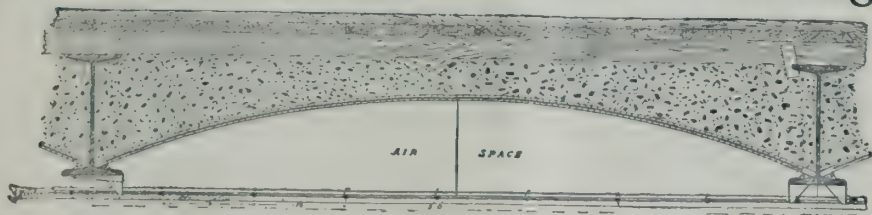
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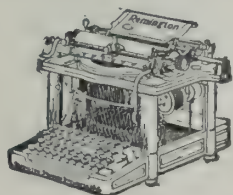
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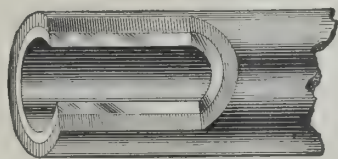
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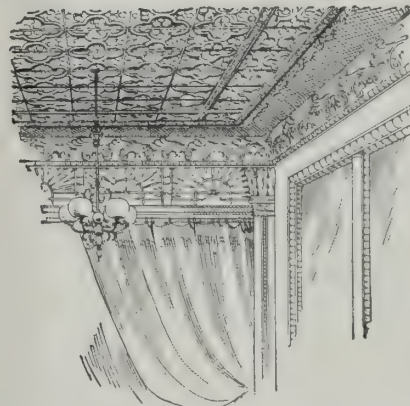
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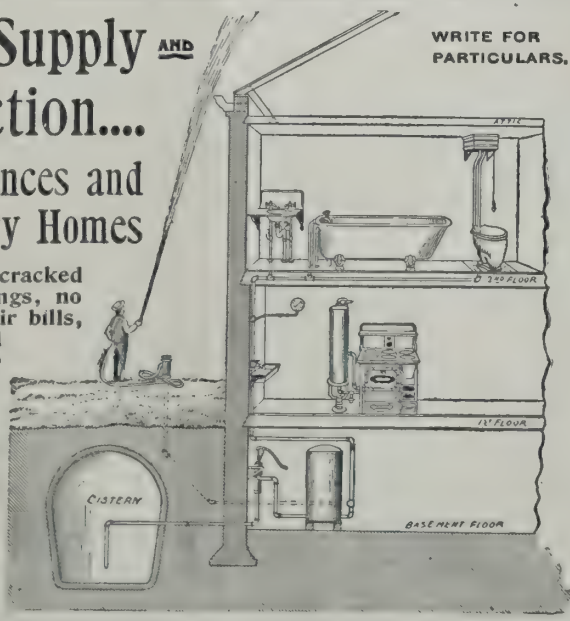
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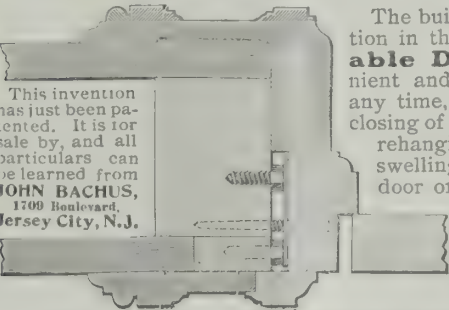
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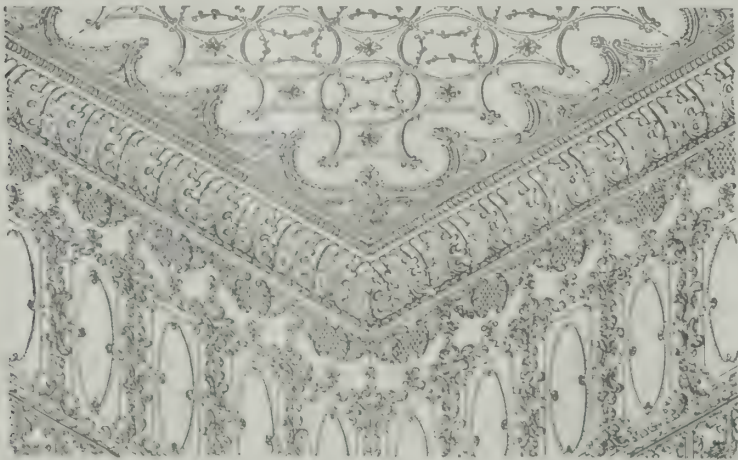
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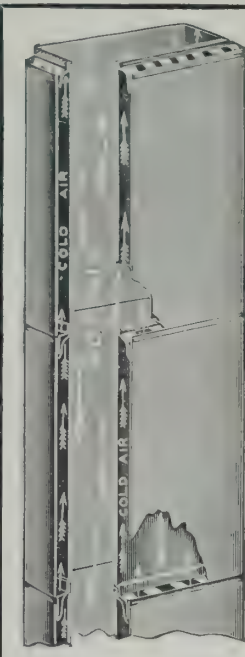


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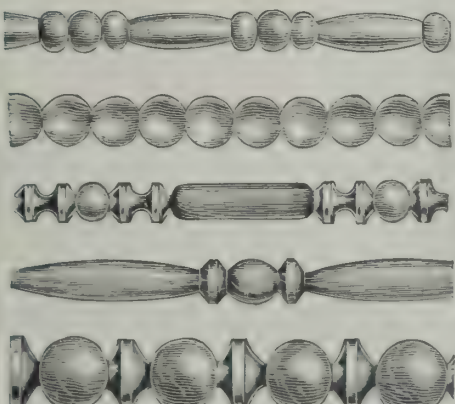
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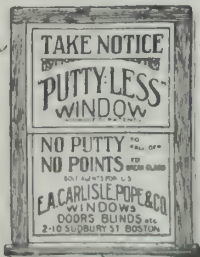
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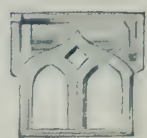
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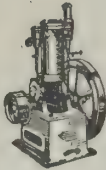
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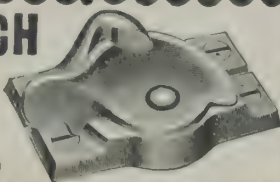
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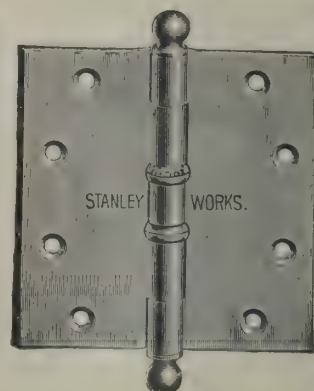
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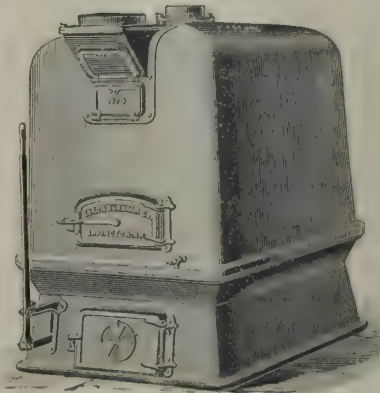
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MR. HOBART A. WALKER, ARCHITECT.

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NEW YORK, MARCH, 1902

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MONTHLY COMMENT.

Is New York becoming a dangerous place to live in? The metropolitan community had not had time to recover from the shock of the dreadful accident in the New York Central Railroad tunnel than it was visited with a fresh calamity, almost as terrible and quite as uncalled for, in the dynamite explosion at Forty-second street in the Rapid Transit tunnel. As a result of these disasters a number of people were killed, very many injured, and, by the last, much property damaged. Well may New Yorkers ask themselves if their city is safe, and wonder if they will return alive from the most ordinary excursion about the metropolis. A good deal of talk has been expended in endeavoring to ascertain why these catastrophes occurred. There is a certain satisfaction in trying to fix blame or in administering censure, but neither of these operations will bring the dead to life nor restore the maimed. The one fact that stands out clear and distinct in this turmoil is that neither accident should have happened. Both were absolutely unnecessary and uncalled for; both were events that might have been foreseen; and both were catastrophes that should have been avoided at all costs. It does not matter if precautions were taken or not. The things happened, and they should not.

Human life is the most precious thing in the world. And it is not the less precious because it is often worthless and without seeming point or utility. Civilization is a movement toward its preservation. Human life to-day is safer, more cared for, better protected, and more worthy than at any previous time in the history of mankind. And yet the recent accidents in New York have shown that, with all our civilization, our resources, our care, our appreciation, some carelessness, some neglect, some human imperfection may send hundreds of people to kingdom come without a word of warning, and irremediably shatter the bodies of many others. Even stately buildings, constructed to shelter people and offered as places of refuge to all who can meet the price, become houses of death and disaster without apparent remedy. It is obvious that, with all our culture, we are not yet able to completely

protect human life as it should be protected in a great community. But no cost is too great that may be needed to surround it with every protection and safeguard.

Mr. Charles M. Shean is one of our most competent decorative artists. He is one of the few men thoroughly trained in the decorator's craft; that is to say, he has made a life work of decoration as it is understood by the mural painter, and thus occupies a wholly distinctive place from the picture men or portrait painters who, as occasion arises, are pressed into service to paint pictures on walls, without, perhaps, a full understanding of the meaning of a wall decoration. Mural painting has made many important advances in the last few years, and Mr. Shean has taken a leading part in this important movement. He contributes to the fall issue of the periodical *Municipal Affairs*, a striking paper on "The Decoration of Public Buildings," which should be read by every one who may, in one way or another, be interested in this phase of art or perhaps concerned with it. He presents a strong plea for the Americanizing of our artistic decorations, and his suggestions on this point are at once timely, valuable, and convincing.

The destruction of great parts of the cities of Waterbury, Conn., and Paterson, N. J., by fire, early in February, brings home the terrible danger of fire to every one who has heard of those disasters, and, in a still more convincing and terrible way, to those who may have suffered from them. That the destructiveness of these conflagrations was heightened by heavy winds does not alter their horror nor diminish the loss they occasioned. The preventives that have been thrown around human life in modern cities have been, on the whole, so great that the inefficiency of modern protection, the inadequacy of fire apparatus, the feebleness of men before the overwhelming force of a tremendous fire unsettles general security, and reduces civilization to chaos. Like the tunnel accidents in New York, neither of these catastrophes should have happened. We do not, perhaps, need to be taught the awfulness of fire; but apparently we need many costly lessons in our own unpreparedness.

The decadence of the home was the theme of a recent conference before the Society of Ethical Culture, at which Mr. Douglas Volk presented some very sound views on this important subject. The idea of permanence, he said, is at the very foundation of home. It must have an atmosphere of memories and associations. It must be a place in which joys and griefs have been lived. The flat has none of these. The home feeling has been killed by modern machinery, and the word to-day means only a place for sleeping and eating. Healthy home occupations are extinct, and young people know how to do nothing, because the machine enters into everything. Even healthy physical exercise is prevented by "labor saving appliances" in many instances, while in others the time saved by the appliances is used up in a struggle to get more. Sincerity and individuality in adornment have been banished from the home by cheap machine-made imitations of things that never were appropriate. A Parthenon frieze is stamped on a cooking stove, and the design that once adorned the robe of a Greek maiden is applied to the border of a dustpan. There can be no beauty that does not possess the four elements—intention, genuineness, order, and variety—and the more we depend on mechanical means the less beauty we shall have. The old handicrafts possessed those qualities because the human individual expressed himself in them, and to-day our museums treasure them because of their beauty.

What shall be done with the wall is a question that frequently bothers the architect and designer; the house owner is perhaps less concerned with it because he usually takes what is given him or what he can find already erected. But the wall is a very important part of the house. It can not be all windows, and therefore a greater or less amount of surface must remain for treatment. A very good rule is to leave it alone; when in doubt do nothing, is a rule that will bring better results in architecture than in most other things. A wall is an enclosure and not a frame on which to hang things. The exterior decoration of walls has hardly advanced sufficiently in this country to render such work either desirable or artistic. External decoration is too apt to be machine-made, to be composed of stock moldings or coarse features. A plain solid surface in which the windows are properly spaced and artistically arranged will often be more effective than the richest of decorations. It is better to do nothing at all with a wall than to try to do something—and fail.

WASHINGTON THE MAGNIFICENT.

No form of art is at once so splendid, so captivating, so impressive, and so useful as the adornment of cities. The transformation of great cities has been accom-

plished more than once in Europe, partly by the gradual change that necessarily accompanies their growth, partly by means of general plans that have resulted in a more or less complete change in plan and decoration. Of late years the surpassing splendor of Paris and other great European capitals that have been completely and successfully transformed has more and more turned the attention of thoughtful people in America toward the possibility of transforming the somewhat sordid character of many of our American communities; or, if not effecting a revolution in their appearance, at least in providing for their future growth on rational lines and in accordance with a thoroughly digested and well conceived artistic plan.

Of all American cities, Washington offers the amplest opportunity for work of this nature. It is the capital of the country; it is the one city that absorbs the thought and the affection of the whole people; it is our national city, the one city of the whole people, without sectional interest, supported and paid for in an almost literal manner by the national purse. It is, moreover, a city created wholly for the government of the nation; it is the one place, in all our vast land, in which every one of our seventy millions of people has a direct and personal interest.

But patriotic pride is, happily, not the only basis that Washington offers for artistic treatment and transformation. It is the only city in America that was planned at the outset for magnificent effect. Its plan is at once the most artistic, and the most capable of artistic evolution of all the plans of American cities. Its public buildings are of a remarkably high character, dignified and stately, effective, and harmonious, crowned by that grandest of all American public buildings, the Capitol itself, a building so fine, so good in itself, so admirably placed, that one never fails to be impressed with it, even if one wonders it is not defaced with the tawdry ineffectiveness one has sadly learned to be almost invariably associated with public buildings in this country.

And now the opportunity seems to have come when the whole city may be made splendid, when the unrelated parts can be brought together, and the plans of the skilled designer who conceived the city as a whole be fully realized and developed. A committee of experts, composed of Mr. Daniel H. Burnham, of Chicago, Mr. Frederick Law Olmsted, Jr., of Brookline, Mass., Mr. Charles F. McKim, and Mr. Augustus St. Gaudens, of New York, has conducted an investigation and prepared a report accompanied with elaborate plans and models that need but the authority of Congress to secure its immediate realization.

A stronger committee could not, probably, have been formed, composed, as it was, of two of our foremost architects, representing the East and the West, a noted landscape architect, and a sculptor of the first rank. The arts that go to make a city were thoroughly and competently represented. The ground had already been prepared for them by L'Enfant in his fine plan, and the Washington they have developed is the city Washington and Jefferson dreamed of and wished to found.

Of all American cities, Washington is the only one that lends itself to monumental treatment. Its streets are broad and well laid out; it has many open spaces and a number of fine public buildings; it is not a manufacturing city and is not overcrowded with its population. The plans proposed by Mr. Burnham's commission are both elaborate and costly; yet why not? The country is rich, the money spent upon the nation's capital and its adornment is money spent for the people by the people; it neither builds up a section nor strengthens a port. And the more splendid the city, the richer its adornment, the more sumptuous its decoration, the grander its buildings, the greater the pride of the whole people, and the greater the satisfaction every patriotic American must take in it.

Washington has been called the City of Magnificent Distances; if the new plans are carried out, it will be truly Washington the Magnificent, the city of light and splendor, a capital of which the oldest civilization might be proud. It does not matter if the proposals are faultless or not; it does not matter if they are just what every one might wish or imagine. The more important fact is that there has been presented to the American people by a commission of thoroughly representative men, a plan for the embellishment of the capital city that embodies the qualifications of grandeur, stateliness, splendor, together with a thoroughly thoughtful unification of usefulness and beauty.

And that, indeed, is the supreme achievement of this plan. Washington is not to be remade over, but it is to be developed. The broken fragments of L'Enfant's plan are to be pieced together; the misfortunes of the past are to be remedied, space is to be found for future growth. It is evolution, not destruction, that is proposed. It is a clear patriotic duty for every American to support this superb project.

EXHIBITION OF THE ARCHITECTURAL LEAGUE.

THE seventeenth annual exhibition of the Architectural League of New York demonstrates afresh the vitality of this our most important architectural society and the importance of its annual show. It is not, as perhaps its name suggests and implies, an exclusively architectural body; but is a society of decorators, sculptors, and architects, of men concerned in the building and adornment of the house and of buildings in general. Its annual exhibitions, therefore, are not mere gatherings of architectural drawings, but are brilliant displays of all the decorative arts, and even broad enough to include smaller arts, such as book bindings and other minor decorative objects.

In a certain sense these annual exhibitions follow a well developed plan, admirable enough, perhaps, in developing the interest of the exhibitors, but perhaps giving them a necessarily uniform and general appearance. Thus the large outer gallery of the rooms in which the exhibitions are held is invariably given up to the decorative display. The walls are brilliant with colored cartoons, decorative panels, with schemes for windows, wall coverings, designs for mosaics, and notable works in interior decoration. The mere householder will perhaps find little of immediate value to him in the decoration of his house; for most of the exhibits gathered here are important examples of public decoration, of great individual merit as a whole, of positive popular interest, and give the exhibition a life and vitality that the most elaborate collection of architectural drawings must fail to do.

The decorative exhibit this year is particularly brilliant, so far as general effect is concerned, although there is not much of great importance. No great decorative scheme is illustrated, although much that is very excellent and interesting is shown. Adjoining the large introductory gallery with its gaily colored walls, are three small rooms in which sundry minor forms of art have been gathered. These all partake of a decorative quality, and include mosaics, burnt wood, ironwork, wall paper, posters, punch bowls, schemes for interior decoration, and the like. Objects that could not apparently be placed in the other galleries are gathered here, with a miscellaneous effect perhaps unavoidable in collections of this sort, but nevertheless unavoidable. Here for example, may be seen two series of "Marine Windows," strange mosaics of glass and shells intended for a houseboat; curiosities in design that hardly merit a place in a serious art exhibition. Here, also, may be seen the remarkable water color drawing of an antique Oriental rug in the collection of Mr. Charles T. Yerkes, drawn in water color by the pupils of the New York School of Applied Design for Women, an amazing technical performance that possesses all the qualities of the actual rug itself.

The architectural portion of the exhibition is hung, as usual, in the great Vanderbilt Gallery. Illustrating, as it does, the work of the year by the leading architects of New York and of other cities, it is necessarily of a very varied character. A number of important buildings projected in 1901, or at least partly brought to completion in the past year, are illustrated in several notable groups of drawings. A number of the competition drawings for the new building of the New York Historical Society are shown; the new building for the Young Men's Christian Association on Twenty-third street, New York; a model of buildings at the Charleston Exposition; models of the proposed water-gate or arch for New York; a great group of drawings and other illustrative material relating to the Memorial bridge across the Potomac at Washington; the designs for the new building of the Department of Agriculture, at Washington; the U. S. Post Office and Custom House at Cleveland, Ohio; the new Custom House in New York; competition drawings for the Essex County Court House, at Newark, N. J. These drawings, and most of them are illustrated by a number of sheets, form perhaps the more monumental portion of the exhibition, the buildings the architects most like to be concerned with and from which they hope chiefly to derive their fame. A general uniform quality runs through them all, derived from the inspiration of the Ecole des Beaux Arts in Paris. None of them, perhaps, can be ranked as great works of architecture; they are rather to be classed as designs of excellent merit, of mild interest, and average performance. They give evidence of honest study, of good taste, of due appreciation of the special problems involved in each.

Domestic work does not dominate this exhibition, and, indeed, one has to look rather sharply for it. Yet there is a good deal of excellent domestic material shown, both in drawings and in photographs. The latter is by far the best medium for exhibiting work of this description, and the extension of this method will be welcomed by all interested in house architecture. It will only be possible to name a few. William E. Stone shows a house for Jesse Benedict Car-

ter, Esq., at Princeton, N. J., and three houses for superintendents for the New Jersey Zinc Company, at Palmerton, Pa. Henry Rutgers Marshall sends some attractive photographs of the dwelling for Paul Leicester Ford, Esq., which are supplemented with plans and sections and a model of the main entrance. The residence for the Chancellor of All Saints' Cathedral, Albany, N. Y., by Marcus T. Reynolds, has an interesting front, largely timbered.

Other houses of interest are shown by Palmer & Hornbostel, for Seabright, N. J.; by Lord, Hewlett & Hull, of a house in East Seventy-eighth street, New York, and at Bernardsville, N. J.; by Augustus D. Shepard, Jr., of a house at Bernardsville, N. J.; by C. P. H. Gilbert, of a residence at Glen Cove, Long Island, a half timbered house built on a hillside with stone lower floor; by Henry F. Kilburn, of a huge castellated dwelling at Tarrytown, N. Y.; by Renwick, Aspinwall & Owen, of a dwelling at Oyster Bay, Long Island, and a very interesting and picturesque group of village stores; by Grosvenor Atterbury, of stucco work for a house at East Hampton, Long Island; by Howard, Cauldwell & Morgan, of house interiors in New York; by Seymour Davis, of a gate lodge at Haverford, Pa.;



A PAINTED PANEL.—ARCHITECTURAL LEAGUE EXHIBITION.

by K. C. Budd, of a seaside cottage; by W. L. Coulter, of a hunting lodge in the Adirondacks.

Special mention should also be made of the extremely interesting residence for Lenox, Mass., sent by Wilson Eyre, of Philadelphia, and illustrated in a beautiful and characteristic drawing. Mr. Eyre continues to be our most individual architect, who endows his buildings with a poetic spirit that no other designer has yet taken the time to produce. Here, at least, is an artist who is content to do artistic work, and who seeks only to satisfy his own ideals.

How far this spirit affects the work of our architects as a whole need not here be discussed. But the most casual observer who discovers this drawing in the crowded gallery must feel that here is a feeling and a work entirely at variance with the spirit that has gone to the making of the monumental drawings that may, at first, attract the attention of the visitor by their size and, perhaps, also by the importance of the buildings shown. Here, indeed, is real art, highly developed, ample, and satisfying.

Still another gallery adjoining the entrance hall of the building has been pressed into service and is filled with a variety of exhibits, partly students' work and partly miscellaneous designs that could not find space in the main galleries.

MARBLE IN MARYLAND.

A good deal of interest has been taken lately in some marble deposits in Maryland which, it is claimed, are equal to the finest of imported marbles. It polishes perfectly and carves easily, although it will hold the sharpest arris. The first layers of the marble as found in the quarry are of a green and gray mixture, with clouded effects. Next comes a veined variety of pink, green, cream, and blue. Below this is a beautiful cream-white. This is one of the most remarkable marbles ever found in this country. It is the exact color and texture of old-ivory, the crystallization being so fine that it is not visible to the naked eye. This gives it the smoothness of satin when finished. In the present stages of development it is not certain whether very large blocks of this cream-white, without any clouds or veins, can be obtained. If they can be had there is nothing in the Carrara marble field that will equal it for statuary purposes. Beneath this variety, says a writer in Stone, is a cream-white with golden yellow clouds.

ENGLISH RULES FOR HOUSE PLANNING.

1. Let the kitchen (the most important apartment) always be on a level with the principal floor—and for strong light and free ventilation it should have, if possible, windows on opposite or nearly opposite sides.
2. The pantry or dish closet should be between the kitchen and dining-room and easily accessible from both.
3. There should be a set of easy stairs from the kitchen to the cellar, and also an outer set into the cellar for admitting barrels, etc.
4. More attention should be given to the arrangement and disposition of such rooms as are in constant use than those but occasionally occupied. Hence, the kitchen and living-room should receive more attention on the ground of convenience than the parlor.
5. Every entrance except to the kitchen should be through some entry or hall to prevent the abrupt egress of cold air, and for proper seclusion.
6. Let the entry or hall be near the center of the house so that ready and convenient access may be had from it to the different rooms, and to prevent the too common evil of passing through one room to enter another.
7. Place the stairs so that the landing shall be as near the center of the house as may be practicable for the reason given for the preceding rule.
8. Let the partitions of the second floor stand over those of the lower, as nearly as may be, to secure firmness and solidity.

A NEW MODEL TOWN.

ANOTHER model workingmen's town is claiming the attention of the sociologists. This appears to be the model of the "models." It is Vandergrift, some thirty-eight miles from Pittsburg, and its creation is the work of the American Sheet Steel Company. Desiring to secure a high grade of workmen for its new mills, the company planned a most attractive residential town. The dreamed-of ideal city was partly realized, in that all the streets were sewerage, piped, and connections made with the building lots before the vitrified brick pavement was laid. There need be no digging up of streets in Vandergrift. The streets are wide, and form arcs of circles, curving with the contour of the ground, and liberal provision of flowers and shrubbery was made. Lots were sold at the prices prevailing in a neighboring town, the only restriction being that liquor should not be sold. Ground was given for four churches, with a stipulation that each was to cost at least \$15,000, the company giving one-half that amount, and a site and \$14,000 was given toward a \$32,000 casino, used for public assemblies, and containing a free library of 2,500 volumes. The town is self-governing, the only participation of the company being in the furnishing of water, gas, and electric lighting. It is almost needless to add that there was no strike in Vandergrift last summer.

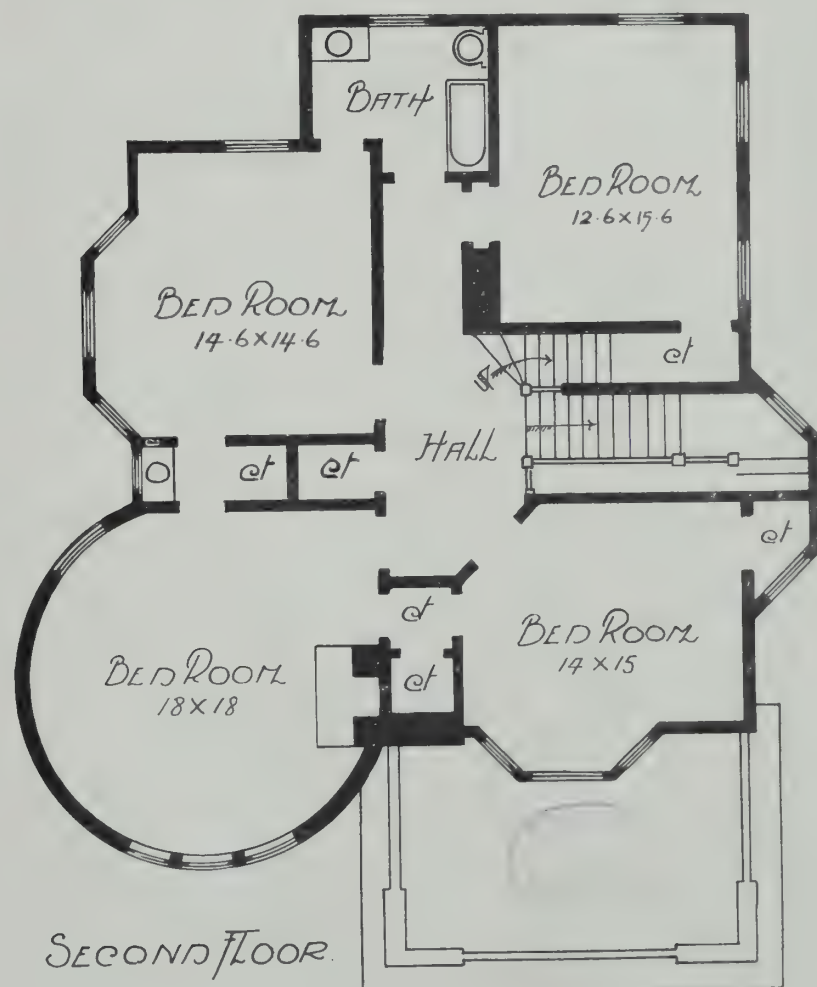
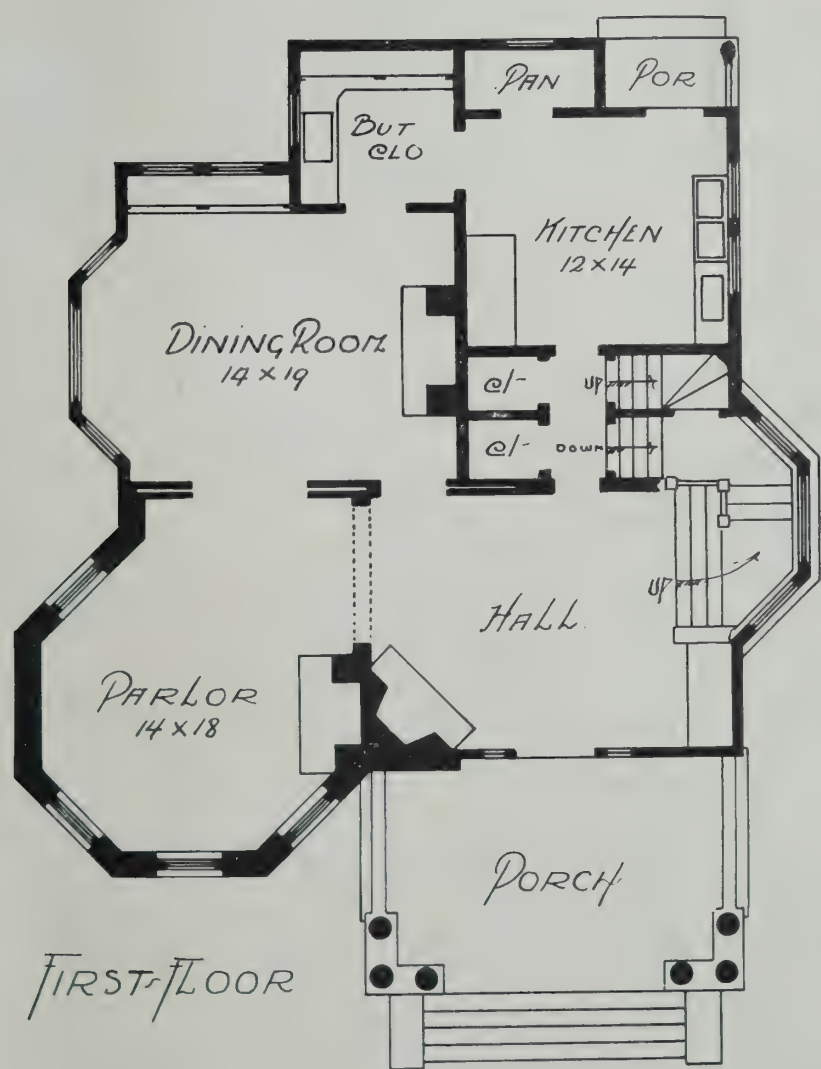
HOUSES IN ROWS.

Perhaps the most mechanical type is the house in a row, where there is more or less repetition, due to the same aspect for chief rooms and the same external dimensions. It is, of course, possible that the design may be a copy of a similar house, and that the architect's assistance may be dispensed with. Hundreds of such houses are built every month without any professional aid. But even in these circumstances the fact does not justify the means. Because a practice is common it does not follow that it is either wise or expedient. Men live in unsanitary dwellings and partake of unwholesome diet, but the fact does not show it is right. Cheapness or avariciousness is the cause of badly-planned and imperfect houses, and this cause leads us to the second point; and here experience has proved that there is no saving in a cheaply-built house. To say nothing of plan or design, the cost of repair is endless, and often exceeds the small fee of the architect.



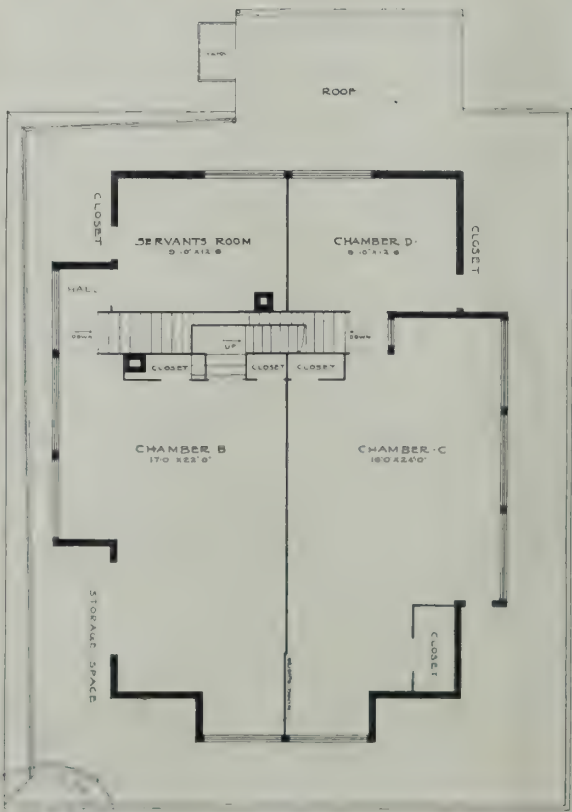
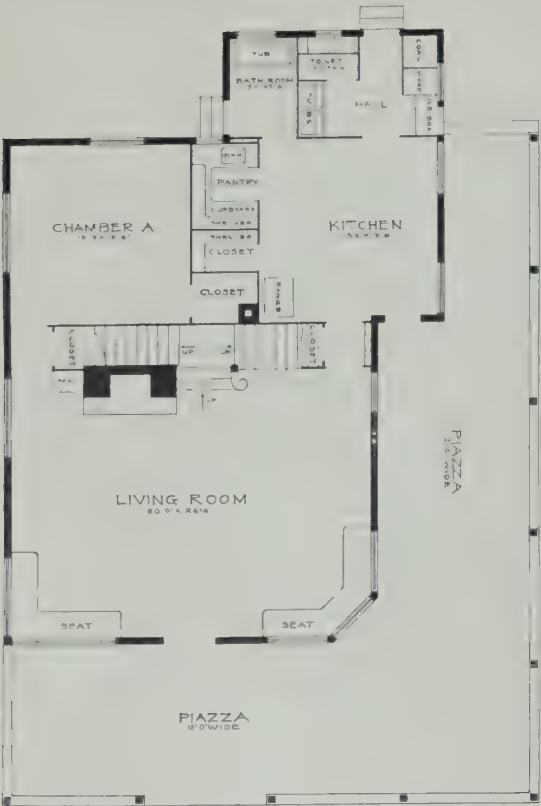
A RESIDENCE AT CHESTNUT HILL, MASS.—See page 56.

MR. H. S. FRASER, ARCHITECT.



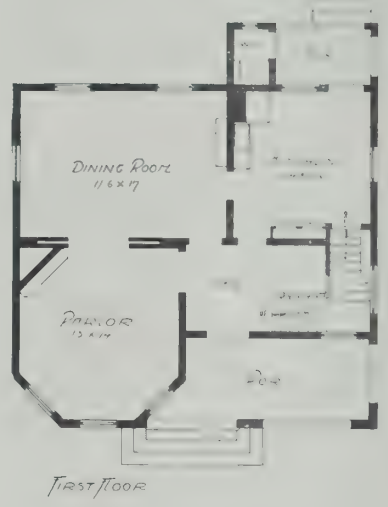
A RESIDENCE AT PARK HILL, N. Y.—See page 56.

MR. F. W. BEALL, ARCHITECT.

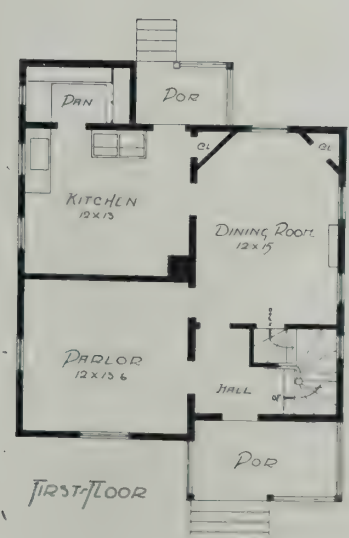
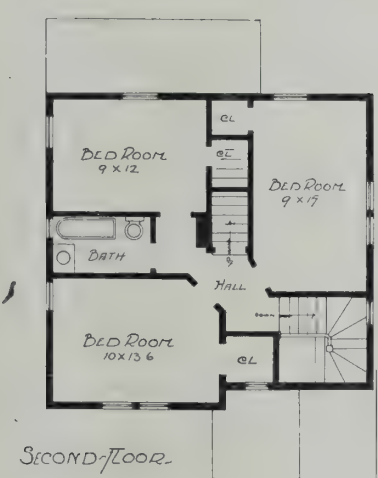


A SUMMER RESIDENCE AT WOODMONT, CONN.—See page 56.

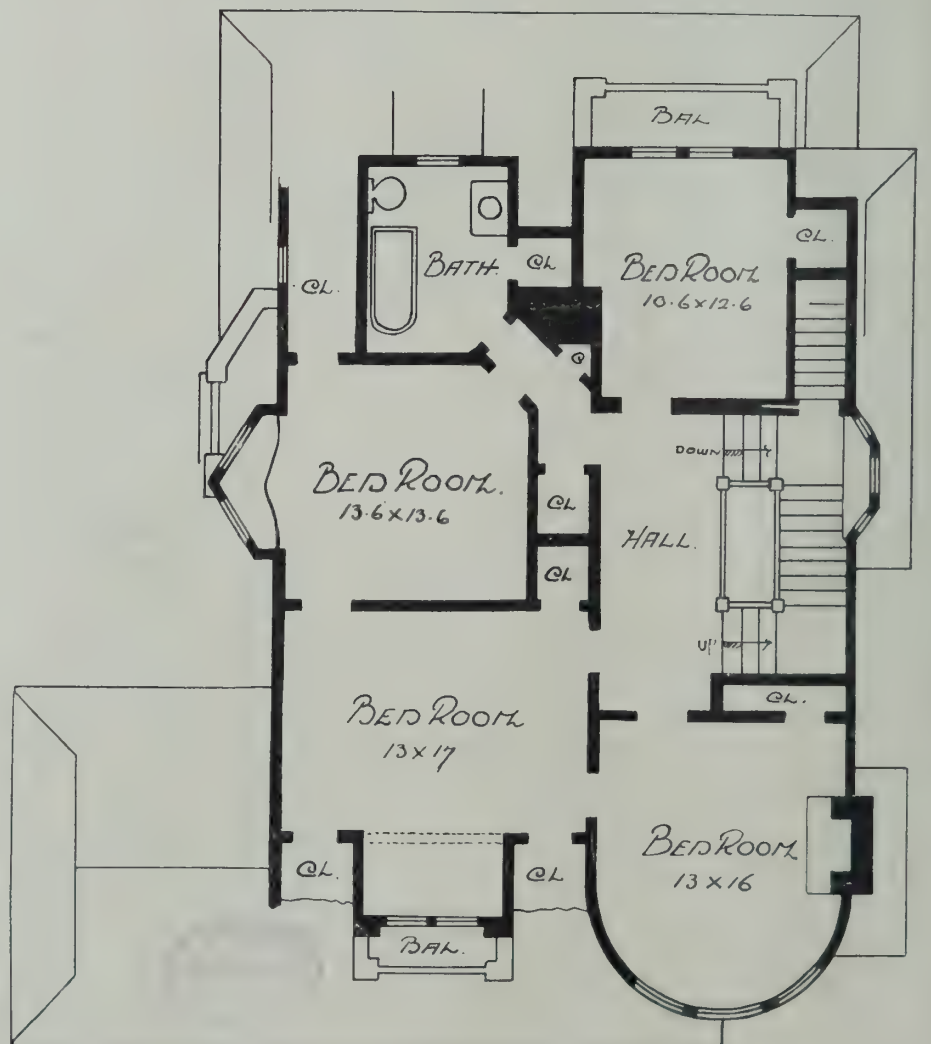
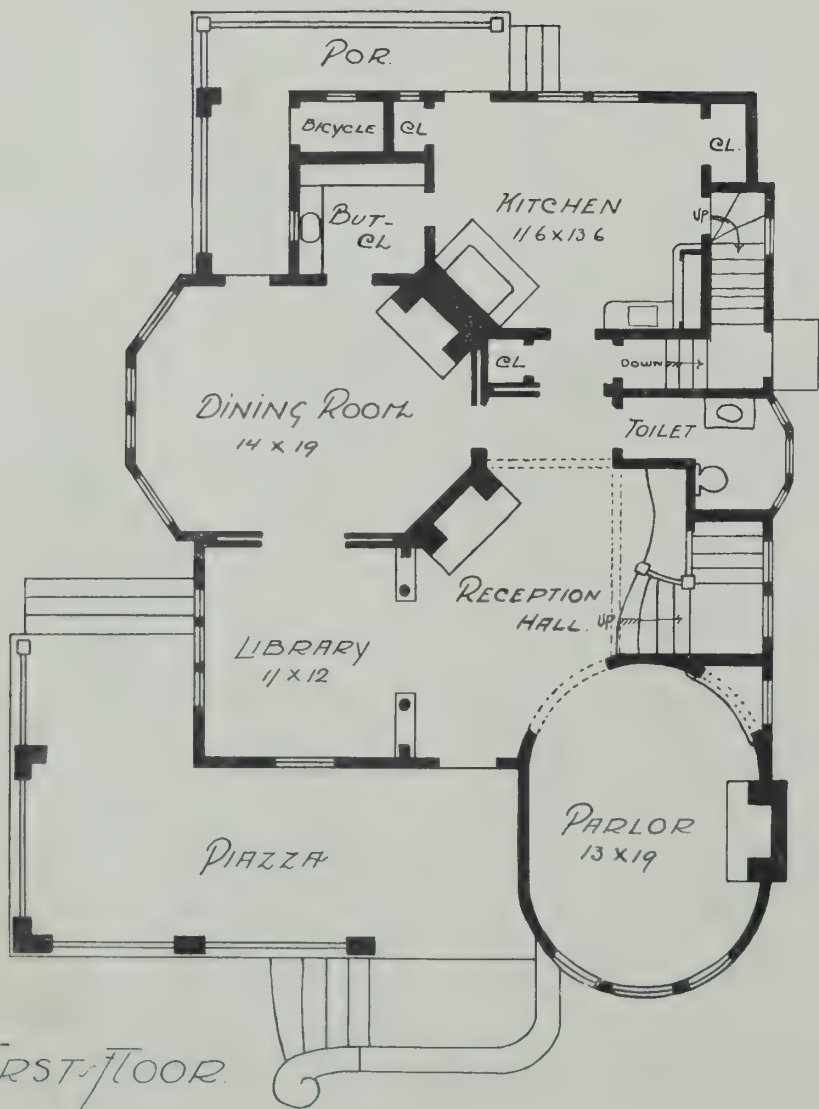
MR. F. R. COMSTOCK, ARCHITECT.



A MODERN DWELLING AT GLENSIDE, PA.—See page 57.
MESSRS. ALBERT ELLIS YARNALL AND E. ALLEN WILSON, ARCHITECTS.



A MODEL WORKINGMAN'S DWELLING AT DERBY, CONN.—See page 57.
MR. THEODORE W. PECK, ARCHITECT.



SECOND FLOOR.

A DWELLING IN BROOKLYN, NEW YORK.—See page 57.

MR. C. SCHUBERT, ARCHITECT.



MURAL PAINTINGS IN THE VANDERBILT GALLERY.



VANDERBILT GALLERY—SHOWING MODEL OF THE CHARLESTON EXPOSITION.



ENTRANCE GALLERY.



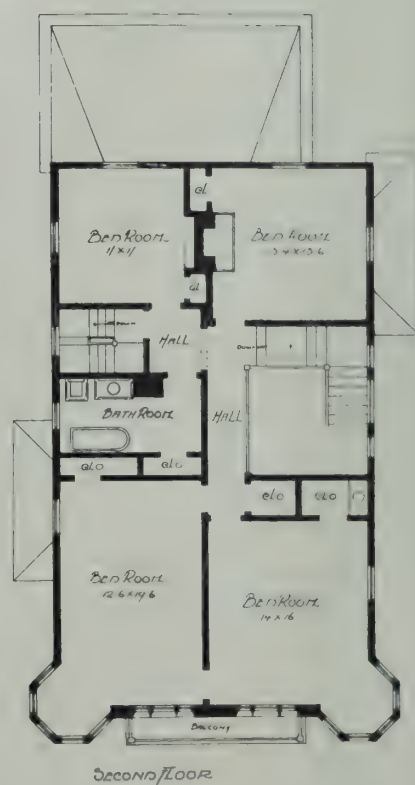
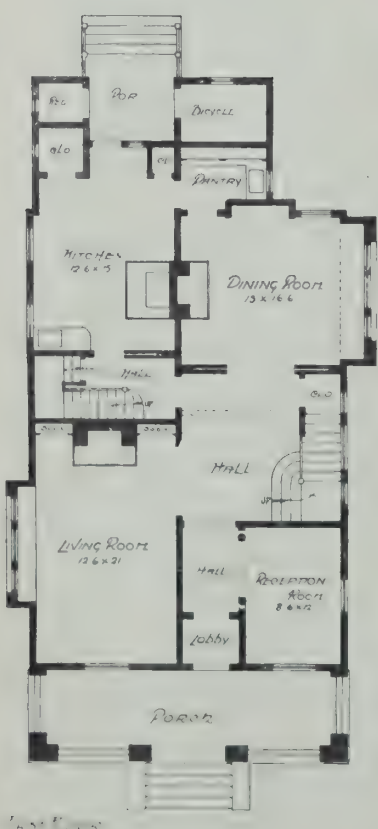


DINING-ROOM.



RECEPTION ROOM.

A RESIDENCE AT GLEN COVE, L. I.—See page 57.
MR. HOBART A. WALKER, ARCHITECT.



A DWELLING AT PROSPECT PARK SOUTH, BROOKLYN, N. Y.—See page 57.

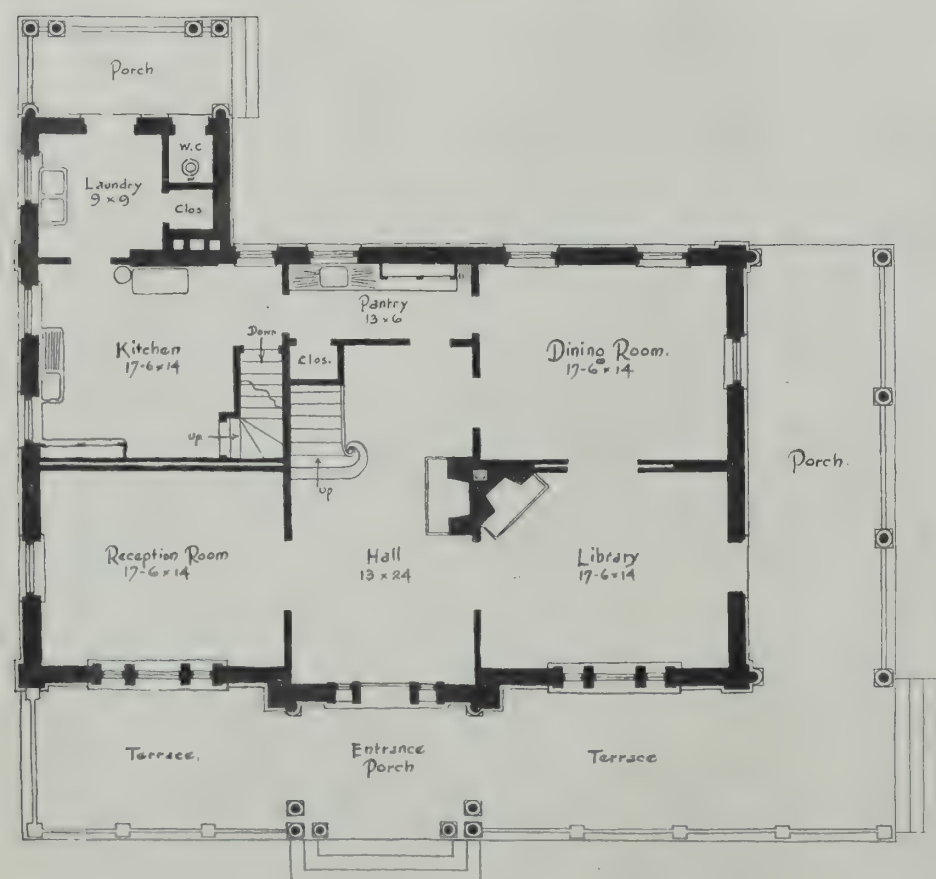
MR. JOHN J. PETIT, ARCHITECT.



INTERIOR OF DINING-ROOM—A DWELLING AT PROSPECT PARK SOUTH, BROOKLYN, N. Y.—See page 57.
MR. JOHN J. PETIT, ARCHITECT.



A RESIDENCE AT PELHAM, GERMANTOWN, PA.—See page 55.
MESSRS. LAWRENCE V. BOYD AND DAVID K. BOYD, ARCHITECTS.



Plan of the First Story.



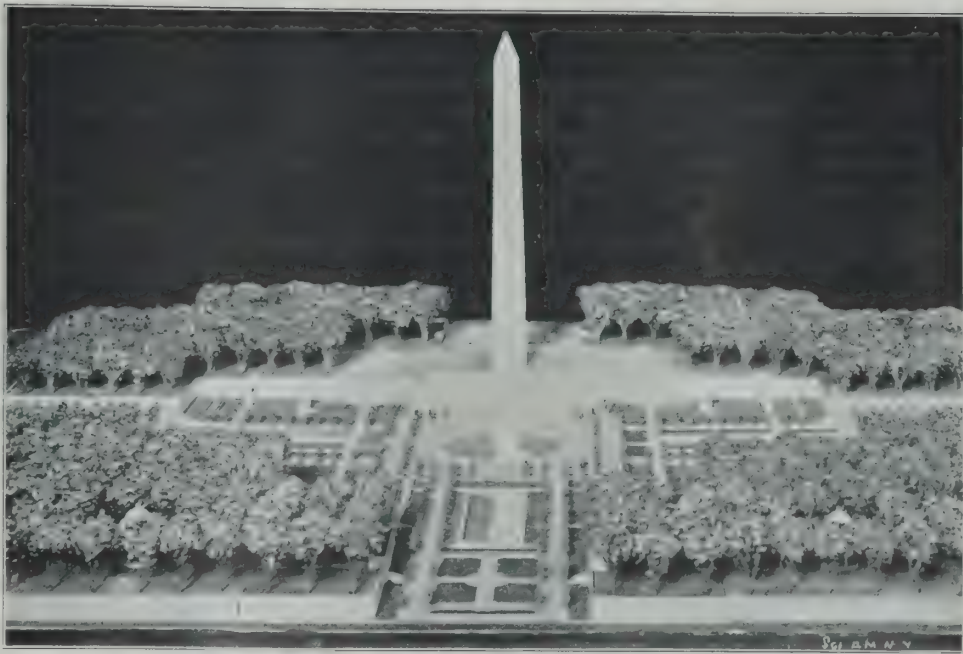
Plan of the Second Story.

A RESIDENCE AT PELHAM, GERMANTOWN, PA.—See page 55.

MESSRS. LAWRENCE V. BOYD AND DAVID K. BOYD, ARCHITECTS.

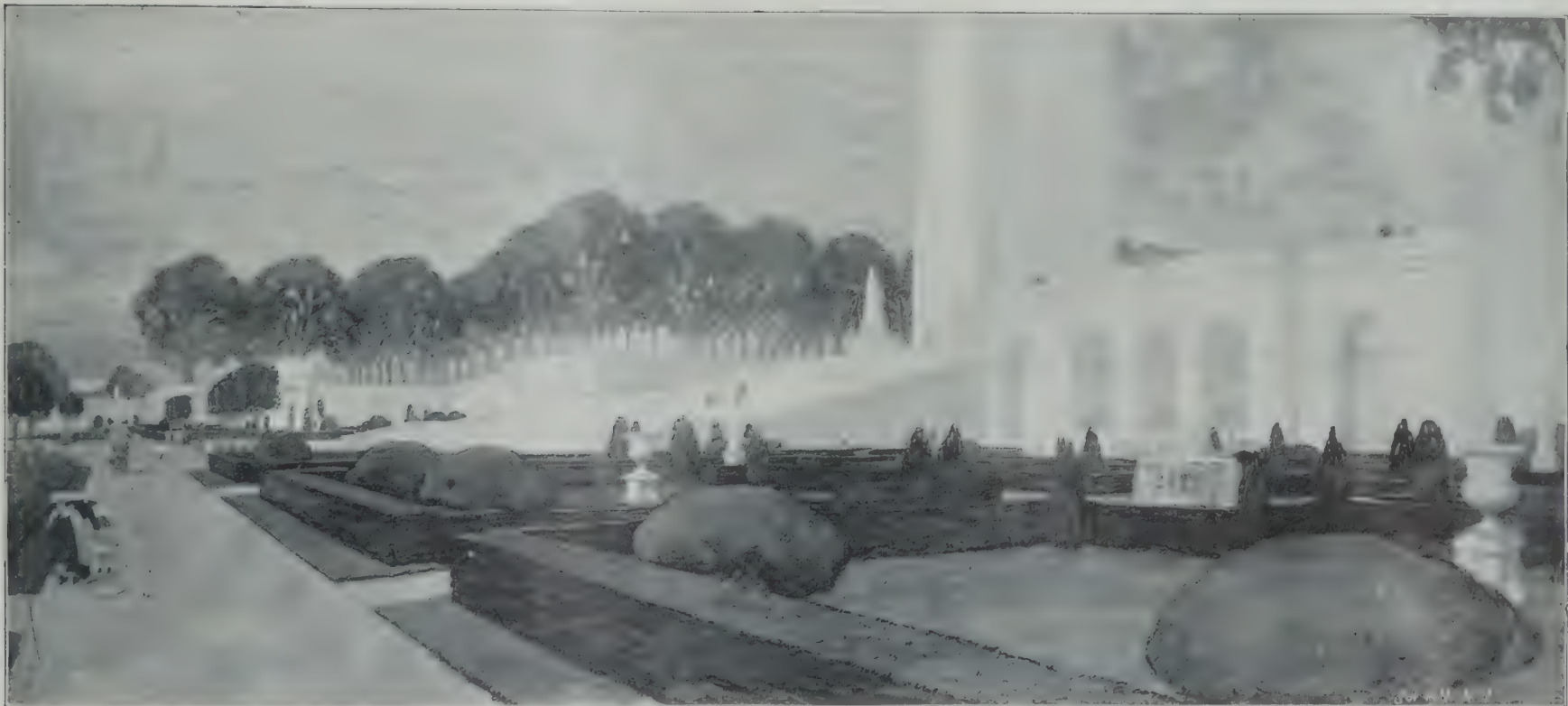
A RESIDENCE AT PELHAM,
GERMANTOWN, PA.

THE residence illustrated on pages 53 and 54 has been recently erected for Messrs. Wendell and Smith, at Pelham, Germantown, Pa. The design is of Colonial style. The underpinning at the terrace and the main part of house are constructed of rock-faced bluestone. The main building above this underpinning is covered on the exterior with a cement stucco and then tinted an ivory-white. The sashes, columns to the porches, and all woodwork are painted an ivory-white. The roof is covered with shingles and is stained a moss-green. Dimensions: Front, 52 ft.; side, 33 ft., exclusive of terrace and laundry extension. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The interior is arranged with a central hall with rooms located on either side. This hall is trimmed with quartered oak and is provided with a paneled wain-

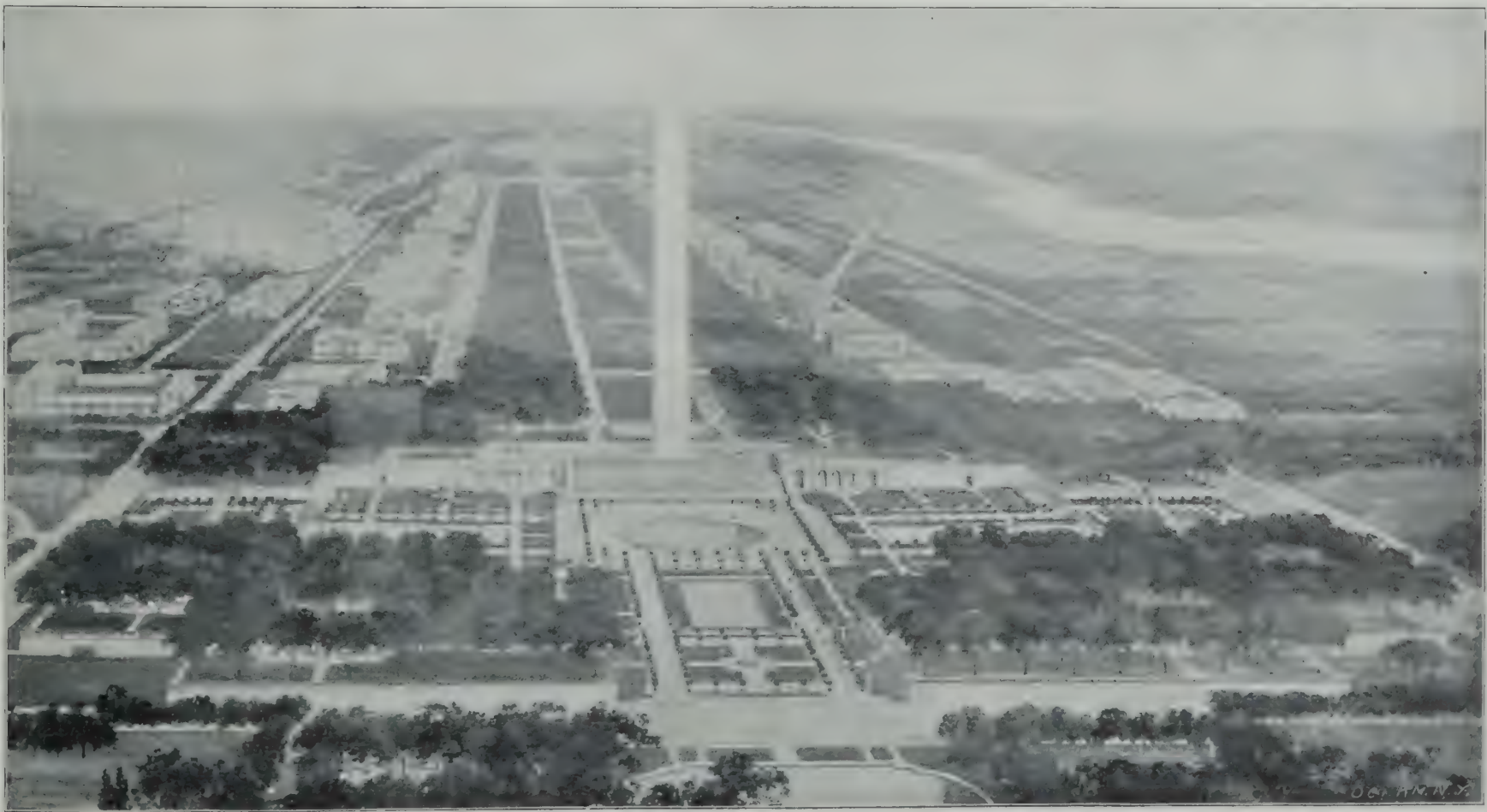


THE WASHINGTON MONUMENT AND SURROUNDING GARDEN.

scoting, an open fireplace furnished with a tiled hearth and facings, and a mantel of quartered oak, and an ornamental staircase with a newel-post formed of a cluster of spindle balusters. The broad landing is furnished with a paneled seat and lighted by a cluster of latticed windows. The reception-room is treated with ivory-white in an artistic manner. The library and dining-room are trimmed with quartered oak; the former has an open fireplace furnished with a tiled hearth and facings and a mantel of oak. The dining-room has a plate-rack of oak extending around the room and seven feet from the floor. The butler's pantry, kitchen, and laundry are trimmed with yellow pine. The butler's pantry is furnished with drawers, dressers, cupboards, and bowl. The kitchen is provided with range, sink, and dresser, and the laundry with wash-trays, closet, etc. The second story is trimmed with white pine and fin-



GARDEN AND TERRACE AT THE WASHINGTON MONUMENT.



VIEW TOWARD THE CAPITOL, WITH NEW DEPARTMENT AND MUSEUM BUILDINGS.

THE EMBELLISHMENT OF WASHINGTON.—See page 59.

ished natural. It contains five bedrooms, nine closets, linen-closet, and a bathroom furnished with a floor paved with tiles, a tiled wainscoting, and porcelain fixtures and exposed nickelplated plumbing. The third floor contains four bedrooms and a bathroom. A cemented cellar contains the usual coal and wood bins, vegetable cellar, cold storage, etc. The house is lighted by gas and electricity, and is heated from a central plant. Mr. Lawrence V. Boyd and Mr. David K. Boyd, of Fifteenth and Market streets, architects, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

MRS. J. L. GARDNER'S HOUSE, BOSTON, MASS.

THE engraving represents the southern front of Mrs. J. L. Gardner's Italian palace, Boston. This new and beautiful building is located in the Fenway. There are two entrances in the front of the building. The one nearest Huntington avenue leads into a narrow corridor from which opens a music-hall extending along the entire Huntington avenue side of the building. From the second entrance one enters a corridor with arches of red brick and red tile floor. There are reception-rooms on either side of the entrance. Following the arched passage one reaches the court, which occupies the center of the palace. It measures 50 x 75 feet, and is covered by a glass roof. The court is surrounded on the lower floor by a cloister, with columns of white marble. The three upper stories have square windows opening on all four sides of the court, each of which is supported by two white marble columns. On three sides of the court on the lower floor are corridors paved with what is known as bluestone or North River flagging, such as is used on street crossings. In these corridors many of the much talked-of art treasures will be placed. There are several to be seen there already. One of these is an ancient marble sarcophagus, with carvings of wondrous beauty, and is valued at \$65,000. Not far from this one comes upon a niche in the wall, in which is placed an ancient shrine of St. Joseph. Beautiful bits of bas-relief and carving are set into the walls along these corridors. Two great lions, one of red and the other of white marble, stand at the end of the vaulted passage leading to the court. The long room which extends across the front of the palace is presumably to be used as a picture gallery. The notable feature in this room at present is the gorgeous ceiling, which was taken from an Italian palace and put up in its original form. On this same story is a Dutch room with a quaint hooded fireplace and ceiling of blackest oak, the beams of which are so arranged as to form fifteen square panels, and in each of these are set paintings by old Flemish masters. On the third floor is a room similar to the picture gallery and directly over it. Nobody seems to know exactly what this is to be used for, but it is the general opinion that it will contain Mrs. Gardner's library and her collection of rare books. On the third story, directly over the Dutch room, is an apartment which is known as the Gothic room. The large rose window covered with glass which is seen at the rear of the building is in this room, and on either side of it are smaller stained glass windows. The upper story of the palace is given over to Mrs. Gardner's own apartments and to the servants' quarters. Mrs. Gardner's suite extends across the front of the building, and consists of a boudoir, sleeping, and bath rooms. The large dining-hall, finished in black oak, extends across the rear of the building. The bathroom is tiled in white, and four inscriptions in Latin are on the walls. In the sleeping-room is a beautiful fireplace of carved marble, which was taken from Mrs. Gardner's Beacon street home. The servants' quarters are commodious. From Mrs. Gardner's boudoir one may step to the latticed-covered veranda, which is over the music hall. The view of the city and the Fenway

which is seen from this point beggars description. Although the building contains all the modern improvements and conveniences, these have been so concealed as in no way to mar the beauty of the architecture or to seem incongruous with Venice in the Middle Ages. The palace will be lighted by electricity and heated by hot air coming through openings in the walls, says the Boston Herald.

A RESIDENCE AT CHESTNUT HILL, MASS.

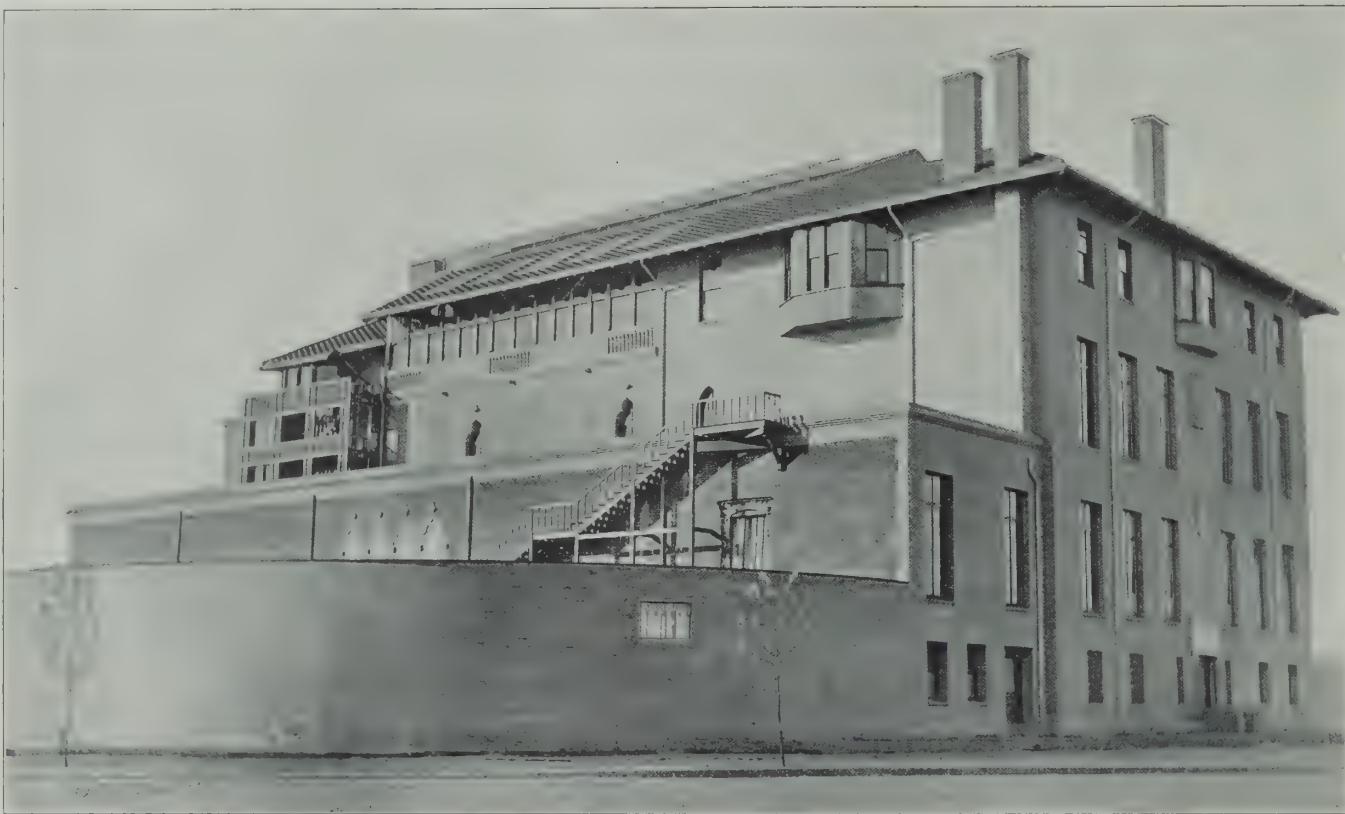
THE residence illustrated on the cover and on page 44 has recently been completed for Mr. Adams, at Chestnut Hill, Mass. The building is placed among a group of trees and rocks, and the style of the house, with its rustic field-stone work and stained shingles, is adapted to such a location. The house has a broad terrace extending across the front, with a terrace wall constructed of field stone. The main entrance is at the front and the piazza at the side, both reached from the terrace. The main part of the first story is constructed of rock-faced field stone laid up at random. The remainder of the building is of wood, with the exterior framework covered with matched sheathing, building paper, and shingles stained a dark, dull green. The trimmings are painted a bottle-green. The roof is covered with shingles. Dimensions: Front, 55 ft. 4 in.; side, 40 ft. 10 in., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The entrance has an open vestibule with seats at either side, and a floor laid with Dutch tile of a reddish brown color. The hall and reception-room are trimmed with white pine, and are treated with

A cemented cellar contains a furnace, laundry, coal and wood bins. Mr. H. S. Fraser, architect, 8 Exchange Place, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT PARK HILL, N. Y.

THE residence which is presented on page 45 has recently been erected for the American Real Estate Co., at Park Hill, N. Y., and from plans prepared by Mr. F. W. Beall, architect, Sherwood Studio, 58 West Fifty-seventh street, New York. The exterior in part is built of stone, stucco, and shingles. The first story of the tower is of local blue rubble stone, as are also the veranda piers, outside chimneys, and underpinning. This stonework is pointed up in red cement, making a contrast with the stucco walls in Colonial yellow, used elsewhere on the first story and the remainder of the building. The trimmings and woodwork throughout are painted ivory-white. The roof is covered with shingles and stained a moss-green. Dimensions: Front, 41 ft.; side 43 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The reception hall, including stairway and mantel, are finished in antique oak. The pleasing features of the hall are a wide paneled seat and a leaded window on the stairs. The front door is broad and low and glazed, as are also its side lights, in Colonial leaded glass. The parlor is treated in an attractive manner with ivory-white enamel, and is provided with a cabinet columned mantel. The fireplace has also a tiled hearth and facings, and ornamental iron linings. The wall decoration is of pink watered silk effect, with the tint suggested harmoniously in leaded windows, and the tilework of mantel. Heavy columns with carved caps on paneled pedestals flank each side of the wide opening between parlor and hall. The dining-room is finished in black Flemish oak with Delft blue wall decorations, and tilework at the fireplace and the mantel. A deep window seat upholstered and cushioned and a broad leaded window over buffet are other artistic features of this room. From the dining-room a spacious kitchen is reached



MRS. J. L. GARDNER'S HOUSE, BOSTON, MASS.

white enamel. Both have paneled wainscotings; the walls above this wainscoting in the hall are covered with green burlap, and those in the reception-room with a white and yellow striped paper. The stairway is separated from the hall in a recess, and has an ornamental staircase with turned newel-posts and a mahogany rail. The alcove contains a paneled seat and an open fireplace, with facings and a hearth of unglazed tile of a greenish hue, and a mantel. The reception-room is separated from the hall proper by an archway with columns resting on pedestals. The library, or living-room, is trimmed with cherry and has a wooden cornice and a nook provided with paneled seats and walls, and an open fireplace with facings and a hearth of Roman brick, and a paneled oak mantel. There are bookcases built in and a bay window provided with a paneled seat. The dining-room is trimmed and finished in mahogany. It has a bay window with a paneled seat at the front, and another one at the side, in which there is constructed a buffet with china cabinets at either side, and in the most attractive manner, with leaded glass doors, etc. The butler's pantry is fitted up with a sink, drawer, dressers, etc. The kitchen is furnished with a sink, a large store-pantry, and a Magee range. It is trimmed with yellow pine. The second floor is trimmed with white pine and is treated throughout with white enamel. There are four bedrooms, den, and a bathroom. The main bedroom has a dressing-room furnished with bathroom fixtures, an open fireplace with facings and mantel, and a bay window. The den is treated with bottle-green paint and is provided with an open fireplace. The two bathrooms are furnished with porcelain fixtures and exposed plumbing all nickelplated. There are two bedrooms and a storeroom on the third floor.

through a butler's pantry containing a dresser, lockers, and sink. The kitchen is provided with the usual fixtures, consisting of range, boiler, sink and washtubs, and ample closets. A passageway under main stairs allows of direct access to the front hall from the kitchen without passing through the dining-room, and it also forms the access to the stairway leading to the cellar and to the second story. The second story contains four bedrooms, closets, and a bathroom furnished with porcelain fixtures and exposed nickelplated plumbing. The trim throughout is treated with white enamel, and the walls are artistically papered in harmonizing colors. The principal bedroom has an open fireplace with tiled trimmings. There are four bedrooms, trunk-room, and storage-room on the third floor. The cellar is well lighted and ventilated, and is concreted. It contains a servant's toilet, coal-bins, and cold-storage room. The house is heated by a hot-air furnace, and is provided with gas, electric bells, speaking tubes, etc., complete. Approximate cost \$6,000.

The engraving was made from photographs taken specially for the BUILDING MONTHLY.

A SUMMER RESIDENCE AT WOODMONT, CONN.

THE summer residence shown on page 46 has recently been erected for Mr. W. W. Walker, at Woodmont, Conn. The building is designed with the effect of being only one story in height, while in fact it is a full two stories, with the piazza roof lines rising into a deck with an ornamental balustrade extending around the same. It is erected on cedar posts with good stone footings. The superstructure is constructed of wood, and the exterior framework is sheathed, papered, and covered with shingles throughout, and then stained and finished in a dark brown

color. The trimmings and blinds are painted ivory-white. The roof is shingled and stained in harmony. Dimensions: Front, 33 ft.; side, 46 ft., exclusive of piazza. Height of ceilings: First story, 9 ft. 6 in.; second, 8 ft. The building is designed for a summer home, and consequently the living-room is the principal room of the first story. It is treated in an attractive manner and contains two large paneled seats, an ornamental staircase with one short flight to a main landing, where the stairs divide and rise in opposite directions to the second story. A fireplace is built of shore stones of varied colors laid up at random. The hearth is laid in red cement mortar, and the shelf is of white marble supported on stones protruding as corbels. There is no plaster in the entire house, and the timbers and studding in the walls and ceiling are dressed and painted an ivory-white, while the beaded paneling behind the framework is treated in colors. The paneling in the living-room is treated in a sea-green color. This living-room is also used for dining uses. The bedroom on this floor is located at the rear of the living-room. The kitchen is trimmed with pine and treated with hard oil. It contains a range, sink, and all modern improvements. There are two well-fitted-up pantries, a bathroom, and a hall at the rear containing laundry tubs, toilet-room, coal and wood bins, and ice-box. The second floor contains two extra large bedrooms, one smaller bedroom, and a servant's room. The cost was \$1,500 complete. Mr. F. R. Comstock, architect, 20 East Forty-second street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A MODERN DWELLING AT GLENSIDE, PA.

The modern dwelling shown on page 47 has recently been completed for Mr. Wm. T. B. Roberts, at Glenside, Pa. The underpinning is of a rock-faced local stone laid up in a rough manner. The superstructure is of wood, and the exterior framework is covered with matched sheathing, good thick building paper, and shingles. This shingle work is stained a soft brown color with Cabot's shingle-stain. The sash and trimmings are painted a cream-white. The roof is covered with shingles and finished natural. Dimensions: Front, 30 ft.; side, 27 ft. 6 in., not including porch. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft.; third, 8 ft. The hall is trimmed with oak, and contains an ornamental staircase with turned newel-posts, balusters, and rail. The parlor is treated with ivory-white paint on the door and window casings, and the walls are treated in harmony. The chimney hearth has a wooden mantel of Colonial style. The dining-room is treated with dark olive-green paint, and the walls have a dado six feet in height of a plain olive-green color, which is finished with a neat molded plate-rack; the space above this plate-rack is covered with a large-figured wall paper in harmony with the dado. There is an ornamental china-closet in the corner, and a mantel. The kitchen is provided with a Novelty range, made by Abram Cox Stove Co., of Philadelphia, an Alberene sink, and a dresser. Stairs lead to the cellar. The second story is trimmed with pine and treated with colors. This floor contains three bedrooms, three closets, linen-closet, and a bathroom. The bathroom is furnished with porcelain fixtures and exposed plumbing. There is a large open attic reached by a trap-door for storage. There is ample space to finish off two bedrooms if desired. A cemented cellar under the whole of the house contains a laundry and a furnace. The price of this house is \$4,550, including the land on which it stands and everything ready for occupancy. Mr. Albert Ellis Yarnall and Mr. E. Allen Wilson, associate, architects, of 14 South Broad Street, Philadelphia, Pa.

The engraving was made from a photograph taken specially for the BUILDING MONTHLY.

A MODEL WORKMAN'S DWELLING AT DERBY, CONN.

The engravings shown on page 47 illustrate a model workman's dwelling, which has recently been completed for Mr. Joseph Alsopp, at Derby, Conn., by The Home Trust Co., of the same place. There is a cellar under the whole of the building with stone foundations, and an underpinning built of red brick laid in red mortar. The superstructure, of wood, is covered with matched sheathing and paper. The first story is covered with clapboards, and the second and third with shingles. The whole is painted Colonial yellow, with white trimmings. The roof is covered also with shingles and painted a dull shade of moss-green. Dimensions: Front, 26 ft. 6 in.; side, 31 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft.; third, 8 ft. The floor plans show six large rooms. The house throughout is trimmed with ash and finished natural. The hall contains an ornamental staircase with turned newel-posts, balusters, and rail. The parlor has a neat wooden mantel. The dining-room, octagonal in form at one end, is provided with a china-closet and a mantelshelf.

The kitchen is wainscoted with narrow-beaded stuff, and has a sink, wash-trays, and a large pantry. The second floor contains three bedrooms, with closets and a bathroom provided with a Standard porcelain-lined tub and other necessary fixtures, and exposed plumbing. The third floor contains ample storage-rooms, but three good-sized bedrooms could be provided on this floor if desired. The cellar contains ample storage room and coal-bins. Cost \$1,600 complete, including cellar. Mr. Theodore W. Peck, architect, Waterbury, Conn.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT GLEN COVE, L. I.

The country residence illustrated on pages 41, 50, and 51 has been recently erected for Mr. William H. Burger, at Glen Cove, Long Island. It has been designed for a summer home exclusively, although a complete heating apparatus has been provided. The foundation is of brick and the superstructure is of frame, covered with clapboards mitred at the angles. The roof is shingled. The body of the house is painted a light cream color with white trimmings. The roof is stained green. The main rooms on the first floor are large and airy, and are connected by wide openings, giving a spacious airy effect. The hall and dining-room are trimmed with quartered oak finished in Flemish style. The hall has a beamed ceiling and a low wainscoting. The dining-room has a seven-foot wainscot, with a vaulted ceiling finished with an ornamental pattern in plaster. The conservatory opening from the dining-room has tall casement windows of leaded glass, which not only form a beautiful background to the view disclosed upon entering the house, but which add greatly to the coolness and comfort of the dining-room. The parlor is treated in white enameled finish and the library in red birch, finished dark. The walls throughout the house are tinted in cold water paints of harmonious colors. The fireplaces where shown have tiled hearths and facings and mantels. Although the view from the house is superb, it is placed secondary to the comfort in the arrangement of the second-story plan. The bedrooms are all on the south side of the house, and all have large windows, so that every advantage is taken of the prevailing southwest breezes. The bedroom doors opening on the corridor have transoms and slat doors outside of the solid doors. There are also louver ventilators in the closets, consequently the bedrooms are always cool and comfortable. The second story hall widens out into a sewing-room which commands a beautiful view of the Sound, and from which the balcony over the porte-cochère is reached. The attic contains six good bedrooms and a servants' bathroom, and the roof deck is reached by a flight of stairs from the third story hall. This house was designed by Mr. Hobart A. Walker, architect, 31 Nassau street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A DWELLING IN BROOKLYN, NEW YORK.

A DWELLING which was recently erected for Mr. Burnell, in Brooklyn, N. Y., is illustrated on page 48. The underpinning is of rock-faced bluestone laid up ashlar. The building above is of wood, and the exterior framework is covered with matched sheathing, good building paper, and then shingled and stained a reddish brown color, while the trimmings are painted cream-white. The roof is covered also with shingles. Dimensions: Front, 37 ft.; side, 50 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The house is simply and compactly planned. The reception hall is trimmed with oak, and is wainscoted four feet in height. It contains a false fireplace provided with a gas grate, and an ornamental staircase with newel-post, balusters, and rail, and a paneled seat at the side of the staircase. The lavatory underneath the stairway is a convenience and is fitted up complete. The oval parlor is an attractive room, and is treated in white and gold. It contains an open fireplace furnished with a tiled hearth and facings, and a mantel of excellent design and workmanship. The columned entrance to the library and the entire wall separating the hall and library are open, except for its spindle partition. This library is trimmed with oak somewhat darker in color than the hall. The dining-room is trimmed with sycamore, and it has a seven-foot wainscoting in the sixteenth century style, and is finished with a neat plate-rack, which is supported on many molded and corbeled brackets. The fireplace is furnished with tiled facings and hearth and mantel. The butler's pantry is trimmed with white ash and is provided with a butler's bowl, china-closet, drawers, etc. The kitchen is trimmed with a similar wood, and the walls are tiled up to the height of five feet. The range breast is laid up with glazed brick to the ceiling. The peculiarity of this kitchen is the scarcity of woodwork, window and door casings being only three inches wide. The dresser is nearly all of glass. The second story is trimmed with cypress, which

is treated natural, and it contains four bedrooms, large closets, and a bathroom. The latter is wainscoted with tile and furnished with porcelain fixtures and exposed plumbing, all nickelplated. The third floor contains the servants' quarters and billiard-room. The cemented cellar contains laundry, furnace, coal-bins, etc. The house has double floors throughout, and the windows are glazed with plate glass. Mr. A. S. Nichols, of New York, made the mantels. Mr. E. G. Vail, of Bath Beach, was the contractor. Mr. C. Schubert, architect, Bath Beach, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A DWELLING AT PROSPECT PARK SOUTH, BROOKLYN, NEW YORK.

A HOUSE of Dutch treatment recently erected for Dean Alvord, Esq., at Prospect Park South, Brooklyn, N. Y., is shown on pages 52 and 53. The entire building is stuccoed on the exterior with a cement composition, and is of a silver-gray tone in coloring. The roofs are covered with a brilliant red tile. The trimmings are painted a bronze-green and the sash a cream-white. Dimensions: Front, 33 ft.; side, 52 ft., exclusive of piazza. Height of ceilings: Cellar, 7 ft. 9 in.; first story, 10 ft. 3 in.; second, 9 ft. 2 in.; third, 8 ft. 2 in. The entrance is into a lobby provided with paneled walls and Dutch doors. From the lobby you enter a small hall which leads into the staircase hall, which contains an ornamental staircase with turned newels and rail of mahogany, and balusters and risers of ivory-white. The side of the staircase is paneled and is treated, as well as all the trim, with ivory-white. A cluster of three windows glazed with small lights of glass afford ample light and ventilation for both upper and lower halls. The reception-room is trimmed with white pine and is treated with white enamel. This reception-room is separated from the hall proper by an arch with column effect. The living-room is treated in the Empire style with excellent effect, and is provided with a bay window at one end provided with a paneled seat. The open fireplace is furnished with tiled facings and a hearth, and a mantel with bookcases built on either side. The dining-room is treated with oak in Flemish style. The walls have a dado of a dull green burlap up to the plate-rack, which is placed 5½ feet from the floor; the space above to the ceiling is treated in harmony. The fireplace has a hearth and facings of red Dutch tile, with a shelf of oak. The butler's pantry door, with its glazed upper panel, is also a good feature of unusual merit. The butler's pantry is trimmed with N. C. pine, and is furnished with sink, drawers, dressers, and cupboards. The kitchen is trimmed in a similar manner, and is provided with a sink, hearth and range, store-closet, pot-closet, and all modern conveniences. The broad porch at the rear entrance contains a refrigerator-room on one side and a bicycle-room on the other. The rear stairway and hall is located conveniently. The second story is trimmed with white pine and is treated in colors. It contains four bedrooms, five closets, linen-closet, and a bathroom, the latter wainscoted, and it is furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains five bedrooms and ample storage room. A cemented cellar contains furnace, laundry, coal and wood bins. Mr. John J. Petit, architect, 186 Remsen street, Brooklyn, N. Y.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

Legal Decisions.

CARELESSNESS OF FELLOW SERVANT.—Where plaintiff was injured, while needlessly working under defendants' elevator, by the elevator boy disregarding his instruction not to come down until called, and the evidence is undisputed that the boy was employed solely to operate the elevator, with no other authority, a verdict should be directed for defendant. *Hall et al. vs. Pools*, 50 At. Rep. (Md.) 703.

CHANGE OF CONTRACT.—Where a building contract allowed the owner to retain twenty-five per cent of the price, his payment of the entire amount was not such a change in the contract as to release the contractor's sureties. *Meyers et al. vs. Wood et al.*, 65 S. W. Rep. (Tex.) 671.

COMPLETION OF BUILDING.—Where the work on a building is substantially completed, and the contractor tenders the same as complete, and it is so accepted by the owner, the contractor can not afterward, against the will of the owner, perform some part that was called for in the contract, but which has been omitted in the construction, and thereby extend the statutory period after the completion of the work within which a mechanic's lien must be filed. *General Fire Extinguisher Co. vs. Schwartz Bros. Commission Co. et al.*, 65 S. W. Rep. (Mo.) 318.

TALKS WITH ARCHITECTS.

No. 14. MR. CHARLES A. RICH ON THE DEVELOPMENT OF THE SMALL COLLEGE.

We were sitting in Mr. Rich's drawing-room, an apartment so crowded with objects of interest, so abounding with reminiscence of travel, and so charming in itself that, for my part, I found it difficult to keep the talk from running off on the most diverse topics. The house is one of the most interesting in New York, being built on a lot but thirty-four feet deep, and yet so cleverly planned, so admirably contrived, as to contain ample room and an apparent abundance of space. This, indeed, is no small triumph to have achieved under such restrictive conditions, but that belongs to another story.

The drawing-room is L shaped, the longer arm reaching to the back wall of the house. On the front is a shallow bow window with an old Italian well head that some time, perhaps, will have a jet of water. On one side is a great fireplace, not one of the gentle little openings for the admission of air that are so common in the modern house, but a genuine fireplace of the old type, built for a wood fire, and spacious enough to heat the whole room. The mantel over it is built in steps, and crowded with relics of travel and collection in foreign parts—cups from the Czar's coronation, old Indian carvings, Persian tiles, ironwork from Africa, Russian ikons, paintings—the treasures of a man of taste, who has traveled for the joys of traveling and who has reveled in the art works he has seen, and whose memories of his journey are kept alive with the real beauty of his souvenirs.

There was so much to see and to enjoy that I found I was spending the entire evening in examining Mr. Rich's treasures; his fine old tapestries, the cabinet of small Egyptian curiosities, his splendidly embroidered chasubles, two of which served as decorative table covers; his carved panels and bed brought from Brittany, with perhaps a sigh of envy at his row of Oriental lamps. I could not, however, spend the entire evening in eliciting incidents of foreign travel from my cultured and delighted host, and the talk, in time, turned to professional subjects.

"There are frequently incidents in the career of every architect," said Mr. Rich, "in which he can engage in some special work that will have a peculiar and absorbing interest to him. If you were to ask what I have been able to do that comes under this description, I would reply, the remaking and rebuilding of Dartmouth College. Properly speaking, the work that has been going on there for a number of years past is better called remaking than rebuilding; for the old buildings are sacredly preserved, and the new ones that are being added have been carefully adapted to the style and situation of the old.

"The problems that attend the transformation of an old college, a transformation that will retain everything of historic or traditional interest, and at the same time give the institution all the advantages of modern architectural equipment, are distinctive, and form a group of questions calling for individual treatment and individual solution. The modern college, whether it be in a city or in a smaller community which perhaps it may dominate, as Dartmouth to a considerable extent dominates the town of Hanover, requires so much that is new and is so completely in advance of buildings of the earlier type and style, that the problem is very seriously complicated when it is necessary, as has been the case at Dartmouth."

"And quite right," I broke in. "We have too much tearing down, too little regard for historic memory, too small appreciation of what the past has left us. An old building is often in the way—the complete destruction of so many demonstrates that structures of this type are too often in the way—but modern progress sometimes overreaches itself in substituting the new for the old. Surely every old building which possesses a wholesome tradition, and which can be made use of in our modern life, should be retained at all hazards especially if it has any part of the slightest artistic interest."

"Very true," returned Mr. Rich; "and that is just what we have been trying to do at Dartmouth. The changes there have been by addition and expansion, not by destruction and rebuilding. We have rebuilt nothing; but many new buildings have been added to the college group in the last few years, and especially under President Tucker's administration; and when the plans now under construction have been carried out, it will be a Dartmouth at once old and new, at once historic and modern. The alumnus can still take pride in the old buildings he knew in his youth, and, let us hope, find some satisfaction in the newer structures which represent the growth and expansion of the old college.

"The modern college, of course, needs many buildings for many purposes. It has long since ceased to be possible to conduct an educational institution with a recitation hall, a simple chemical laboratory,

and a dormitory; but a great many buildings are needed for a great many purposes, each calling for the expenditure of a great deal of money, each needing an endowment, and each calling for the best effort by the architect in reaching a solution of the particular problem upon which he happens to be engaged.

"The architectural requirements of a modern college are very great. Immense sums are yearly given to our colleges, and a very large proportion of these amounts is expended in buildings. These structures may be ornamental and even grandiose, or they may be designed on simple lines calling for the minimum of cost with the utmost results in space and accommodation. College buildings designed on the former system have, I readily admit, a great attraction to the architect and the donor if they happen to be individual memorials; but great buildings do not make a great college, and it is frequently possible to obtain the best college result—which surely is the end to be sought—by less ambitious means.

"The system adopted at Dartmouth has been on the more modest lines. Simple lines and forms have been chosen, decorative adjuncts for decorative effect have been subordinated to structural requirements, and the general style has been either directly in harmony with the older buildings with which the new ones are brought directly in contact, or of such historical significance as renders them suitable for the situation and the place.

"The buildings at Dartmouth fall naturally into two categories, the old and the new. As I have already said, it is the intention of the college authorities to retain the old buildings as they are without external change. Thus the college yard is to-day practically what it was as far back as 1840, and so, it is hoped, it will remain. The most notable structure here is Dartmouth Hall, one of the best examples of Colonial collegiate architecture still remaining in this country. A number of internal changes have been made, but the building is still dowered with some of the most personal of Dartmouth memories, and so we may trust we will always have it with us. Reed Hall was built in 1840, and the college church in 1796, although added to in 1877 and 1889, being restored internally at the latter date. Two houses near the church, the older of which was long the residence of Miles Olcott, of the class of 1790, will be removed when the quadrangle is completed, although both will be preserved.

"Between the old buildings, erected in the first half of the nineteenth century, or surviving from the eighteenth century, and the newer ones erected within the last ten years, are a number of others, built at various times as funds were obtained or as the growth of the institution demanded. These were built, as a rule, in the style of architecture that seemed most in vogue at their date, and were placed where it was judged they would be most convenient.

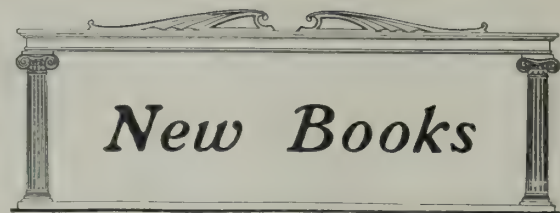
"For some time past it has been obvious that this system, or lack of system—for such it really was—contained many inconveniences and impossibilities. A miscellaneous character was being given to the college group which was injurious to the general effect. The best results were not obtained by the college as a whole, and a quite unnecessary diversity and variety in the buildings was being obtained.

"In the latest development of Dartmouth, therefore, a general scheme has been developed, at once available for the present buildings of the college, and adaptable to the after growth. This, indeed, is the plan on which all large architectural undertakings are now carried out, and had it been possible to adapt it to the needs of Dartmouth earlier the results to date would have been greatly more gratifying to its friends and helpful to the institution.

"The first step was the determination of a general plan or scheme which would bring the existing structures into harmonious relationship with each other, and permit the determination of new sites for new buildings which would help the old as well as be convenient in themselves. The next step was the designing of new buildings in a style of architecture at once harmonious and quiet and in keeping with the older traditions of the college. New buildings like Sanborn House, Crosby House, the Butterfield Museum, Richardson Hall, Fayerweather Hall, Wilder Hall, and College Hall have, therefore, been designed, not, indeed, in a uniform style, for that is apt to produce monotony of effect, but in a spirit that seems to fit in with the glory of old Dartmouth, and in which we, who have been concerned in their erection, feel a natural pride."

BARR FERREE.

THE word "beautiful" is fast being overworked. We have long had the city "beautiful," and now come the life "beautiful," the house "beautiful," the garden "beautiful," the farm "beautiful." Of beauty there seems no end. And yet everything around us is sordid and dull. But perhaps these "beautiful" folk are building better than they know.



New Books

ARCHITECTURAL ENGINEERING, WITH ESPECIAL REFERENCE TO HIGH BUILDING CONSTRUCTION, INCLUDING MANY EXAMPLES OF PROMINENT OFFICE BUILDINGS. By Joseph Kendall Freitag, B.S., C.E. Second edition, rewritten. New York: John Wiley & Sons. 1901. Pp. xiv, 407. Price, \$3.50.

The second edition of this valuable work has been entirely rewritten and greatly extended by the insertion of much new matter, additional illustrations and the like. The title is not quite accurate, since it is exclusively concerned with the engineering problems of the high building and does not cover every phase of the broader subject of architectural engineering. As the author truly remarks, while the technical press and the proceedings of the professional societies abound with papers and information on the subject covered by this book, there seems room for a general treatise which would cover the whole ground, and this has been produced in this volume in a very thorough and practical way. It is interesting to note that, when the first edition of this book was written in 1894, the examples illustrated were chiefly taken from Chicago; since then, however, high building practice in the East, and especially in New York, has rivaled and even outstripped that of Chicago, and hence any examples of recent New York work have been included.

The book contains ten chapters dealing with skeleton or cage construction, fire protection, typical buildings, erection, permanency, etc.; floors and floor planning; framing; exterior walls, piers; spandrels and spandrel sections, bay windows; columns; wind-bracing; foundations; and specifications and inspection. The subject is developed as the design for the building itself would be developed in the architect's office, and is illustrated with plans, sections, details, formulæ, etc. The author wisely enough does not enter into a discussion of the esthetic aspects of the high building, but he illustrates a number of recent structures which are offered as touching on this point. It is almost needless to add that even with the care manifestly taken in selection this feature of the book contains some weird examples of modern architecture.

THE TENEMENT HOUSE LAW OF THE CITY OF NEW YORK. With Headings, Paragraphs, and Full Indexes. Edited by William J. Fryer. New York: The Record and Guide. 1901. Pp. xix, 55.

This pamphlet contains the full text of the tenement house law, arranged with headings and paragraphs and edited by William J. Fryer, whose work in preparing text-books of building law is well known. It is a convenient and useful pamphlet.

LIGHT, HEAT AND POWER IN BUILDINGS. By Alton D. Adams, Member of American Institute of Electrical Engineers. One 12mo. vol., cloth. Pp. 102. Price, \$1. New York: W. T. Comstock.

This book is intended as a manual on the light, heat and power in buildings, its object being to present in compact form the main facts on which selections of their sources should be chosen. In the discussion of the subject questions of economy and efficiency are fully discussed, together with the requirements of equipment to suit different conditions. While scientific theories are referred to, yet the purpose is rather to make practical suggestions that will be applicable in actual practice than enter upon theoretical discussions as to the merits of various classes of apparatus. A feature of special interest in the work and its chief novelty is that arrangement by cost of service from widely different sources are set down side by side. This feature of the book is one that will be appreciated by architects and others who wish to study the essential features of plants of this character for their buildings.

THE BOOK OF THE GRAPE. By H. W. Ward, F.R.H.S. London and New York: John Lane. 1901. Pp. 97. Price, \$1.00, net.

This valuable little book is one of the Handbooks of Practical Gardening, edited by Harry Roberts. It covers the general subject of grape culture in a thoroughly practical way. It is the result of long experience, and while prepared from the English point of view, the cultivators of the grape in America will find it both helpful and interesting. The chapter on the decorative value of the vine is especially suggestive.

GAS FITTERS' RULES. The People's Gas Light and Coke Co., Chicago, Ill. Pp. 15.

An admirable summary of the best rules governing the piping of buildings for the distribution of gas for light and fuel.

Garden Notes

AN interesting paper on the "Scientific Methods of Moving Trees" appeared in a recent issue of the weekly *Scientific American*. The moving of large trees has, for some time, been a feature of all-important landscape work, and it is a matter of some interest to know how it is best done and what are the scientific principles underlying it. The tree-mover is the invention of Mr. Henry Hicks, of Westbury, N. Y. In operating it the tree, if of 14 to 26 inches diameter of trunk, is dug by starting a circular trench with a diameter of 30 to 40 feet. An undercut is made beneath the roots with a light prospecting pick, and the soil picked out and caved down with a spading fork or picking rod, the points of which are rounded to avoid cutting off the roots. The loose dirt is shoveled out of the bottom of the trench and the roots are uncovered, tied in bundles with lath yard and bent up, out of the way of the diggers. If the roots are to be out of the ground even for one day in dry weather, the bundles are wrapped in clay mud, damp moss, and straw or burlap. When the digging has progressed within from 4 to 8 feet of the center, the tree is slightly tipped over to loosen the central ball, which cleaves from the subsoil near the extremities of the downward roots. On sand or hardpan subsoil this is at a depth of 2 to 5 feet. In deep soil it may be necessary to cut some downward roots. A ball of earth is left in the center from 5 to 12 feet in diameter. In loading for removal, the cradle of the mover, which is pivoted above or back of the axle, is swung over to the tree, the trunk first being wrapped with cushions and slats. It is thus clamped to the cradle by chains and screws without injuring the bark. By means of a screw 9 feet long operated by a ratchet lever or hand-brake wheel, the cradle lifts the tree from the hole and swings it over in a horizontal position. Pulling in the same direction by tackle fastened in the top of the tree aids the work of the screw. After the tree is loaded, the roots on the other side of the axle are tied up to the perches. The front wheels are on pivots, and the roots are not broken by the swinging of the axle. The roots are next drawn aside to put in the pole and driver's seat. Planks are placed under the wheels, and the mover is pulled out of the hole by tackle.

In remaking gravel walks it sometimes may be necessary to pass the old materials through a 1-inch mesh sieve, and to make use only of the rougher portion. After making sure that the drains are in good order, make the bottom level, and place a layer of the rough materials on it, finishing off with another layer of fresh gravel; level with an iron rake, avoiding the collection of the largest stones in places. When the leveling is done, pass a heavy roller over the walk. If the walk can be left unused for a week, the gravel will bind much firmer if it be well saturated once or twice with water previously, using a large watering-can with the rose, before and after the roller has been over it. Two men should work the roller, while two or more afford the water. When paths newly graveled are in use directly afterward, the work should be carried out while the weather is dry. The central part of a path may be from one to two inches higher than the sides, according to its width. All binding gravel walks should be rolled every few weeks, while moist. Gravels which contain much sand never bind thoroughly, and are unsatisfactory.

The raising of vegetables under glass has, for a number of years, been a profitable industry near our large cities. Nearly a thousand acres of land on Long Island and New Jersey are covered with glass sashes, and during the cold weather hardy vegetables are raised under them. In competition with Southern vegetables these near-by products of glass-covered farms command higher prices and more general demand. Hot-house lettuce, radishes, kale, spinach, tomatoes, and other luxuries bring prices in midwinter that are within the reach of the wealthy only. Modern conditions of life and manufacturing industries have contributed to this change of farming from summer to winter, and the same factors will continue to operate in the near future to further the same end. The manufacture of glass and glass sashes has enabled farmers to cover an acre of land to-day at an expense of one-third what it cost ten or twenty years ago. The truck-gardens near the large cities are too valuable to remain idle even a part of the year, and by covering them with movable sashes they can be made to produce crops at all seasons of the year. Thus the early spring, late summer, and midwinter crops of vegetables are commonly produced on the same land.

Civic Betterment

THE EMBELLISHMENT OF WASHINGTON.

THE illustrations on page 55 reproduce three views of the proposals made by Mr. Daniel H. Burnham and his associates for the embellishment of Washington. Only a portion of the new proposals are shown in these illustrations.

It is proposed to secure for the Mall a uniform width of 1600 feet throughout its entire extent. The axis of the Capitol and the Washington Monument is to be defined by an avenue a mile and a half in length and 300 feet broad, with elms planted on either side, four abreast. The cross axis of the Mall, forming a thoroughfare between the body of the city and river front, will be laid out as a garden. Areas adjacent to the Mall and averaging more than 400 feet in width from the Capitol to the Washington Monument are set aside as sites for the museums and buildings devoted to scientific purposes. The unsightly railway terminal, which is now in the Mall, will be removed to another portion of the city.

Not only will the monument be brought into the Capitol vista, but the Mall will be restored to its original use as a grand setting for the two great buildings of the nation, the Capitol and White House. To the distance of one and a half miles from the Capitol to the monument the reclamation of the Potomac flats adds another mile, giving opportunity for an extension of the treatment accorded the Mall and also a new and great memorial to Abraham Lincoln, to stand on the axis of the Capitol and monument, near the bank of the Potomac. The proposed Lincoln Memorial consists of a portico of Doric columns 250 feet in length by 220 feet broad. The Lincoln Memorial will be the gate of approach to the park system of the District of Columbia. A broad paved quay or landing space will skirt the Potomac; the proposed Memorial Bridge, to be erected at a cost of \$15,000,000, will lead directly across the Potomac to the mansion house at Arlington and the national cemetery; and drives up the valley of Rock Creek will afford natural connection to the National Zoological Park.

Connecting the Washington Monument and the Lincoln Memorial will be a canal 200 feet in width and 2,300 feet in length and similar to those at Versailles and Fontainebleau. West of the monument it is planned to place a garden, which will create an axial relation with the White House, this latter being accomplished by a sunken garden framed in by tree-bearing terraces in the shape of a Greek cross. The center is marked by a great pool, with rectangular basins. From the garden a flight of steps 300 feet in width leads to the base of the monument, giving that structure forty additional feet of height. The space south or in the rear of the White House will be left practically undisturbed. Between the monument and the Potomac will be a great place of recreation to be known as Washington Common, the plan for which contemplates a stadium bordered by smaller playgrounds.

The south side of Pennsylvania avenue is designated as a site for the District Building, the Armory for the District Militia, a Hall of Records, and other similar structures. The connection between the Mall system and the Capitol is formed by a rectangle 1,000 feet long and 450 feet wide, relieved by plots of green and flanked by two public buildings. The chief decoration of this area, to be known as "Union Square," will be the Grant Memorial, associated with which will be the figures of his great lieutenants, Sherman and Sheridan, standing independently yet forming a single composition. The grounds at the Capitol will be elaborated by terraces enriched with basins and fountains, in which the water falling from one level to another is poured finally into a great central basin at the street level. The Commission has provided for a wonderful array of fountains and for an increase in the water supply which will make possible the copious and even lavish use of water in these fountains. In addition to these main features, the plan for the improvement of Washington embraces many minor projects, such as the creation of a magnificent "Cliff Drive" on the Palisades of the Potomac, and the creation of a great boulevard system connecting the various parks.

A good deal of difficulty has been met in London in disposing of the fine house of the late Lord Leighton. Offered to the nation, no steps have yet been definitely taken for the control and use of the mansion. In time, doubtless, it will become the property of the public, but it seems strange this handsome gift should not have been at once availed of.

Household Notes

THE introduction of mechanical devices into the modern household calls for new forms of artistic embellishment which shall be both useful as well as ornamental. An electric push-button does not seem, in itself, to offer much field for the artist, and yet the large house of a wealthy man will often contain as many as fifty or sixty. Fifty or sixty spots in any house must be more or less a source of annoyance and an interference with any decoration, and it is not strange, therefore, that some thought should be given to their ornamental treatment. Electric push-buttons of artistic design, either alone or as part of a small decorated panel of metal, have been in use in England or on the Continent for some time, and their introduction into costly houses in America has already begun. A set of American manufacture is described as prepared for a white and gold drawing-room. They are of silver, studded with opals, and are to be set on a plate of onyx in a silver frame. Handsome as these buttons are, they do not equal the foreign ones, designed by artists, and delicate works of art in themselves.

Some hints on new draperies and housefurnishings are given by the Tribune. The long-discarded valance, or lambrequin, it seems, has been making a persistent effort to regain its place in the decoration of the house, and this spring's fashions in drapery materials suggest that the effort is meeting success. Several of the leading manufacturers have brought out some highly effective styles, to be treated with cord pendants or lace appliqué. Another novelty is the "leaded" window sash curtain, whose design gives a stained glass appearance. One of the new curtains is a wonderful intermingling of embroidery, insertion, and appliqué on a lace foundation, and silken draperies show the same originality of treatment.

Ever since the art of man first persuaded the cocoon to unwind its silken treasure, says The Upholsterer, silk has held a higher place in human esteem than any other fabric material. And while it is true that cretonnes and tickings and denims are in many cases peculiarly appropriate, it is only by combining them with more dainty weaves that the best effect can be secured. Among the new silks noted by The Upholsterer for new decorations are some extremely impressionistic Art Nouveau effects in the shallow or printed warp silks which show the lines and soft colors of a stained glass church window. The Yama Mai silks are broché taffetas made from silk taken by the Japanese from wild cocoons. There are six patterns, each in from six to twelve different colorings, and the light and shadow effects caused by the bold contrast between the transparent ground and the figures that rise with all the variety of hand embroidery are fascinating. Among the most attractive of the fine muslins are those with narrow colored stripes in balanced groups, in rose or gold or Nile or heliotrope, as the purchaser wishes; and those in ivory which are adorned and flounced most variously. Two things that distinguish a bed set with Arabian lace appliqué on white net are the pretty effect produced by the manner of the cording and the double rectangle on the valance. Some of the less expensive muslins have a ten-inch inserted border printed in large floral figures.

A novelty now on the market is the appliqué motif, with a ground of cloth of gold, edged with gold cord. The designs are fleurs-de-lis seven inches deep, daisies, and others suitable for the purpose. They have a cement backing that causes them to adhere to the fabric that they are to embellish by the application of heat. One of the new window draperies has a design that makes the single curtain look like a pair, and is intended for narrow windows. It comes in different widths, and is three and a half yards long. This style may be hung straight, or if wider than the window be full at the sides. A novel portière idea is illustrated in the use of a material 120 inches wide. This is for "double doors" space, and does away with the heretofore prevailing fashion of having the opening in the middle. The curtain is drawn back from one side only, and the remainder hangs in straight folds.

Flat owners have a good deal to say as to the merits of small kitchens—everything convenient and to one's hand. As a matter of fact, so many kinds of work must be done in the kitchen that the larger room offers many more advantages. Small kitchens are as unhealthy and as inconvenient as small bedrooms.



THE following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY by MUNN & Co., Solicitors of American and Foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

BLOCK OR TILE FOR PARTITIONS, WALLS, ETC.	W. A. C. Waller, London, England.	January 7.....	690,811
ROOFING TILE.	J. W. Carnes, Pierce, Ohio.	January 14.....	691,239
ROOFING TILE.	N. Monshausen, Milwaukee, Wis.	January 21.....	691,650
ARTIFICIAL GRANITE.	M. Arnn, Glade Spring, Va.	January 21.....	691,711

CARPENTRY.

WEATHER STRIP.	G. W. Golden, Detroit, Mich.	January 7.....	690,417
WEATHER STRIP.	C. W. Gautschl, Milwaukee, Wis.	January 7.....	690,648
WINDOW.	E. A. Sanders, Saginaw, Mich.	January 14.....	691,182
INLAYING OF WOOD.	H. C. Webb, Smethwick, England.	January 14.....	691,214
FLOOR COVERING.	M. Barnett, Washington, D. C.	January 21.....	691,434
SHINGLE.	G. T. Murdock, Wellsville, Ohio.	January 21.....	35,592
WINDOW FRAME.	F. N. Boyce, Battle Creek, Mich.	January 28.....	692,003
WEATHER STRIP.	P. D. Jones, Loveland, Iowa.	January 28.....	692,014
WINDOW PANELS, AND OTHER SLIDING FRAMES.	J. Thorpe, Sheffield, England.	January 28.....	692,039
WINDOW.	J. Lyes, Buffalo, N. Y.	January 28.....	692,159
WEATHER STRIP.	J. Cook, Coldwater, Mich.	January 28.....	692,181

CONSTRUCTION.

LATH FOR PLASTERING FOUNDATIONS.	J. John, Chicago, Ill.	January 7.....	690,435
FLOOR CONSTRUCTION.	J. W. Rapp, New York, N. Y.	January 7.....	690,609
FLOOR AND CEILING CONSTRUCTION.	J. Schratwieser, Brooklyn, N. Y.	January 7.....	690,621
CEILING.	J. Freckmann, Hildesheim, Germany.	January 7.....	690,646
DUST CHUTE FOR BUILDINGS.	J. C. Kimsey, Philadelphia, Pa.	January 14.....	691,149
MATERIAL OF CONSTRUCTION.	E. Thacher, New York, N. Y.	January 21.....	691,416
STEEL CONSTRUCTION.	H. C. Clark, Bellevue, Pa.	January 21.....	691,531
STEEL CONSTRUCTION.	H. C. Clark, Bellevue, Pa.	January 21.....	691,599
COMPOSITION CAP FOR MANTEL COLUMNS.	E. S. Kennedy, Washington, D. C.	January 21.....	691,635
SKYLIGHT.	C. Rupp, Philadelphia, Pa.	January 21.....	691,668
EAVES-TROUGH.	J. C. Carr, Burlington, Ind.	January 28.....	691,744
FILE-FACED SURFACE AND METHOD OF CONSTRUCTING SAME.	W. P. Meeker, Newark, N. J.	January 28.....	691,791
BUILDING SUPPORT.	M. H. Callahan, Aspen, Colo.	January 28.....	692,179

ELEVATORS.

ELEVATOR DOOR.	J. Mathews, Chicago, Ill.	January 7.....	690,749
ELEVATOR SAFETY APPLIANCE.	G. Hall, Providence, R. I.	January 14.....	691,310
BRAKING MECHANISM FOR ELEVATOR CARS.	O. M. Fritsch, Philadelphia, Pa.	January 21.....	691,617

FIREPROOFING, FIRE-EXTINGUISHMENT.

FIREPROOF WINDOW.	L. D. Bierach, Milwaukee, Wis.	January 7.....	690,392
SELF CLOSING FIREPROOF WINDOW.	F. D. Swaney, Kansas City, Kans.	January 7.....	690,535
FIRE EXTINGUISHER.	J. H. Britton, Los Angeles, Cal.	January 7.....	690,556
FIRE EXTINGUISHER.	C. F. Brigham, Chicago, Ill.	January 7.....	690,633
FIRE ALARM APPLIANCE.	D. F. Spring and A. Long, Wheeling, W. Va.	January 14.....	691,197
FIREPROOF WINDOW.	T. Voigtmann and S. H. Pomery, Chicago, Ill.	January 14.....	691,211
AUTOMATIC FIRE EXTINGUISHER.	H. K. Milner, Birmingham, Ala.	January 14.....	691,283
FIREPROOF FLOOR.	O. Hoff, New York, N. Y.	January 21.....	691,466
AUTOMATIC FIRE EXTINGUISHER.	F. Grinnell, New Bedford, Mass.	January 28.....	691,760
FIREPROOF SHUTTER.	J. E. Guild, Worcester, Mass.	January 28.....	691,761
FIRE ESCAPE.	T. G. Joyce, Scranton, Pa.	January 28.....	691,775
METHOD OF FIREPROOFING WOOD.	K. Ricker, Zernsdorf, Germany.	January 28.....	691,812
CELLAR PIPE FOR EXTINGUISHING FIRES.	M. H. Hart, Brooklyn, N. Y.	January 28.....	691,858

HARDWARE.

SASH FASTENER.	J. A. Kemp, Farmington Hill, Pa.	January 7.....	690,440
DOOR STOP.	W. V. Bleha, St. Louis, Mo.	January 7.....	690,555
COMBINED DOOR STOP AND LOCK.	G. H. Sawin, Worcester, Mass.	January 14.....	691,003
BUTT HINGE.	T. W. L. Schafer, Los Banos, Cal.	January 14.....	691,077
LOCK.	A. B. Fergusson, New York, N. Y.	January 14.....	691,125
LOCK.	E. T. Rogers, Philadelphia, Pa.	January 14.....	691,180
SASH LOCK AND LIFT.	T. Berquist, St. Croix Falls, Wis.	January 21.....	691,348
SPRING HINGE.	M. C. Bersted, Chicago, Ill.	January 28.....	691,838
SASH FASTENER.	E. A. Bronson, Newburgh, N. Y.	January 28.....	692,047
COMBINED LOCK AND LATCH.	M. C. Patrick, Seattle, Wash.	January 28.....	692,068
SASH FASTENER.	C. M. Zirkle, Richmond, Va.	January 28.....	692,100

HEATING AND VENTILATION.

VENTILATING WINDOW.	E. A. Glessner, Boston, Mass.	January 14.....	691,260
RADIATOR ATTACHMENT.	G. W. Nistle, Chicago, Ill.	January 28.....	691,796

PLUMBING.

WASHSTAND FIXTURE.	J. Barrett, Boston, Mass.	January 7.....	690,550
FAUCET AND VALVE.	E. A. Pohlman, New York, N. Y.	January 21.....	691,569
TANK.	G. Becking, Chattanooga, Tenn.	January 21.....	691,585
WATER CLOSET.	W. E. Hinsdale, New York, N. Y.	January 28.....	691,768
URINAL.	C. Desormoux, Cleveland, Ohio.	January 28.....	35,617

TOOLS.

SPIRIT LEVEL.	D. Lesh, West Fairview, Pa.	January 12.....	691,063
LEVEL AND PLUMB.	J. V. Janin, Seattle, Wash.	January 14.....	691,146
CARPENTER'S SQUARE.	H. Smith and G. W. Lemmon, Englewood, N. J.	January 14.....	691,192

MISCELLANEOUS.

ROOFING MATERIAL.	F. S. Miller, Brooklyn, N. Y.	January 7.....	690,526
TERMINAL FOR SPEAKING TUBES.	H. O. Brown, Boston, Mass.	January 7.....	690,557
PIGMENT AND PAINT COMPOSITION.	C. D. Vreeland, Chicago, Ill.	January 21.....	691,421, 691,422, 691,423
CHEMICAL ROOFING MATERIAL.	J. M. Wright, Bloomington, Ind.	January 28.....	691,882



A NEW COMBINATION SAW.

THE Seneca Falls Mfg. Co., 276 Water Street, Seneca Falls, N. Y., have added to their extensive assortment of wood-working machinery a new size of their Union Combination Saws, known as No. 8, a general view of which is shown by the accompanying illustration. It is designed to supply the demand for a light power machine for use by carpenters, builders, cabinet



makers, and wood-workers generally. Suitable for ripping up to 3½ inches, also cross-cutting, mitering, and with attachments, scroll sawing, edge molding, beading, grooving, dadoing, etc.

It is made with a strong and rigid iron frame, steel arbor and babbitt-lined boxes, which are adjustable. The combination wood and iron table top is 28 inches wide by 36 inches long; the middle portion of iron is 10 x 36 inches in area and has in the center two hard wood strips fitted one on each side of the saw. The table is hinged at the back and can be adjusted up or down by the hand screw in front for rabbeting, grooving, dadoing, etc.

The pulley on outer end of saw arbor shaft is 3 inches in diameter and 2½ inches face.

The regular Union scroll-sawing and Union molding attachment can be used on this machine, and either can be attached almost as easily and quickly as changing saws.

For a more complete description address the company for their Catalogue A, which also describes their complete line of wood-working machinery.

RECORDING THERMOMETERS.

RECORDING thermometers are absolutely necessary for use in control of temperatures of gas mains, in indicating temperatures of coke oven gas passing through condensing plants for the conservation of by-products, in processes of vulcanizing rubber goods, in heaters and ovens, in malt house kilns, dry kilns, mash tubs, tanks, vats, hot blasts, chimney gases, liquids, air-pipe gases, steam food water, cold storage, drying-

rooms, air ducts, and all closed spaces under either pressure or vacuum, and are made to measure and record up to eight hundred degrees Fahrenheit. At all times a uniform heat can be maintained, and the apparatus shows what the temperature is at any moment without opening doors, etc., to read inside thermometers. These sensitive, accurate, reliable, and severely tested instruments of various sizes and ranges of measuring and recording continuous temperatures day and night are made by the celebrated Bristol Company, at Waterbury, Conn. They are known to last and to work without a break or hitch for years, and to require no attention other than to renew the dials, ink the pen, and wind the clock. The charts are generally made to revolve once in twenty-four hours, but special charts for clocks of one, six, and twelve hours—or one-week revolutions—are made to order. Bristol's recording thermometers for outside atmospheric ranges of temperature, and making continuous records upon a chart revolved once in one week, are located within buildings. They are not exposed to the injurious influences of inclement weather, and may be placed twenty-five feet from the point at which the temperature is to be measured. The bulb portion of the mechanism is attached to the outside wall of a building and is housed in a latticed box, and thoroughly protected from precipitations, reflections, and radiations. It consists of a series of helical pressure gauge tubes, with their lower ends free, and at points of suspension opening into the capillary tube which connects the recorder and the bulb portion. The bulb tubes, the connecting tube, and the recorder are completely filled with alcohol and sealed under pressure. Changes of temperature at the bulb produce corresponding changes of pressure, which are transmitted to the pressure-gauge and recorded on a chart graduated to read in degrees Fahrenheit. All instruments are finished in nickelplate and guaranteed. The Bristol catalogue contains many illustrations of the company's recording thermometers, with full descriptions. The New York City office is at 121 Liberty street.

A NEW COMBINED CATALOGUE.

J. A. FAY & EGAN Co., the large makers of improved wood working machinery, of Nos. 209 to 229 West Front street, Cincinnati, Ohio, have just brought out a new complete 450-page catalogue, showing to advantage the immense line of machines they are making for working and cutting wood.

The company has heretofore issued separate catalogues, one for the Fay and one for the Egan departments of their establishment, and these were in their turn pretty large and complete. But to facilitate matters, and enable buyers to gain an adequate idea of the many diversified lines of machines they are turning out, they finally decided to combine the two into a large and complete book, showing each and every machine they make, together with full description and details.

They have embodied in this new book all the new and improved machines which they have recently introduced on the market, and most of which have been patented. The catalogue is thus entirely up to date and complete in every particular.

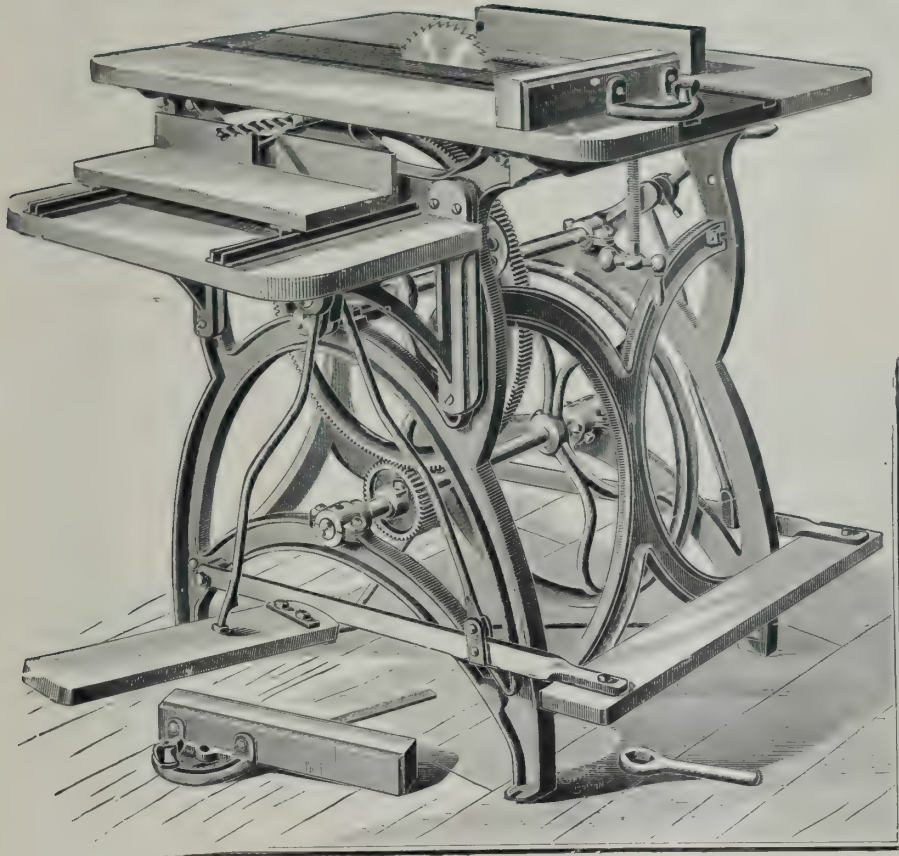
This book is invaluable to all wood-workers, as it shows entire outfits for:

1. Car and railway shops, bridge and farm machinery builders.
2. Furniture, chair, and box factories.
3. Saw and planing mills, and special sash, door, and blind machinery.
4. Wagon, carriage, and buggy factories.
5. Hub, spoke, wheel, and handle works.
6. Shipyards, arsenals, and technical schools.
7. Trunk, coffin, and piano factories, and others.

The size and character of the book necessarily prevent an indiscriminate distribution, but the company will be pleased to forward a copy of it, charges prepaid, to any manufacturers and foremen and those interested who will write.

J. A. Fay & Eagan Co., of Cincinnati, Ohio, the large manufacturers of standard wood working machinery, have just opened a new branch office at 69 Chapin Block, Buffalo, N. Y., in charge of Mr. B. E. Crafts, who will at once enter into active business operations to further the interests of the company. Mr. Crafts has heretofore represented the firm as salesman for that territory, but the continually increasing business of the company necessitated this new move, which will enable them to better cater to the wants of the users of wood working machinery.

MARSTONS' HAND & FOOT POWER CIRCULAR SAW.



Iron Frame, 36 inches high.

CENTRE PART OF TOP IS MADE OF IRON ACCURATELY PLANED, with grooves on each side of saw for gauges to slide in.

Steel shafts and best Rabbitt metal boxes
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Two 7 inch saws and two crank handles with each machine.

Boring table and side treadle.
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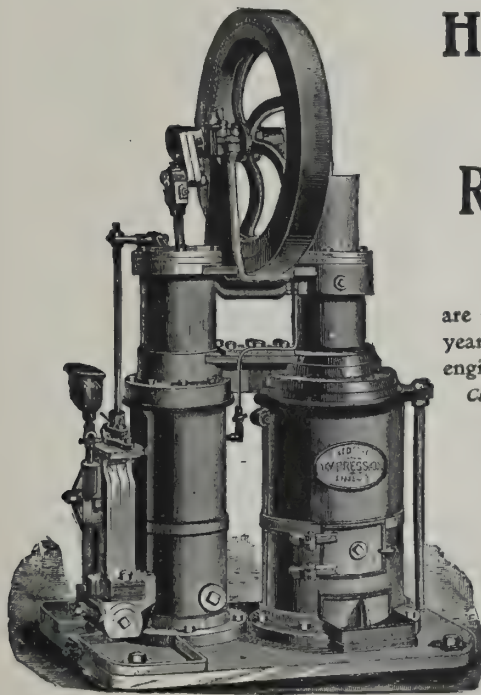
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692 Craig St., MONTREAL, P. Q.
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Teniente-Rey 71, HAVANA CUBA.



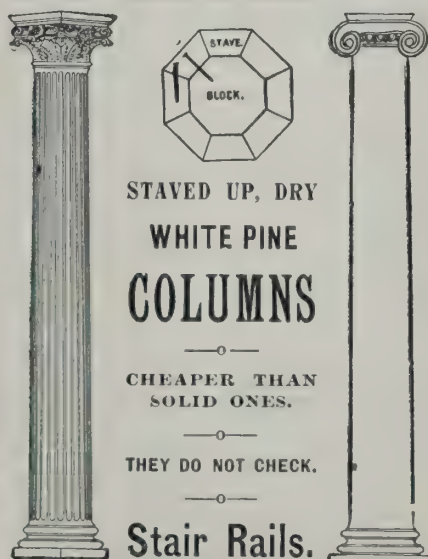
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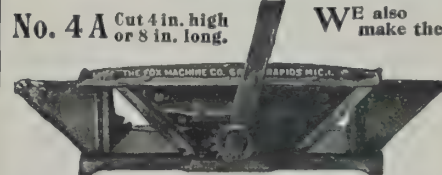
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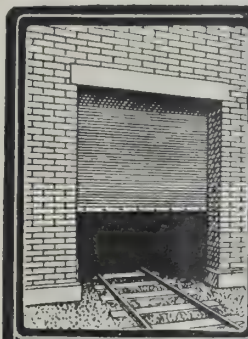
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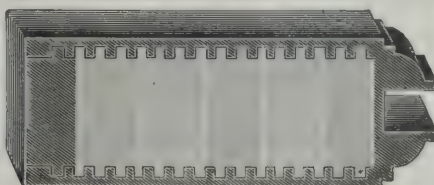
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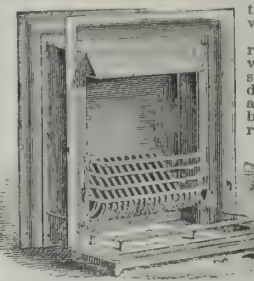
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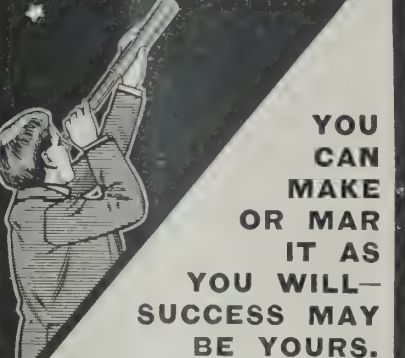
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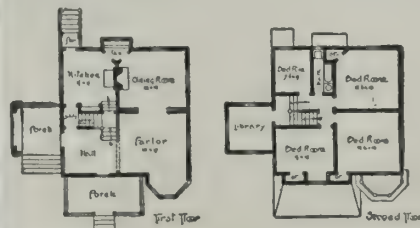
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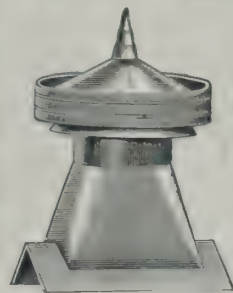
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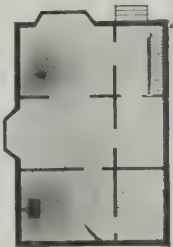
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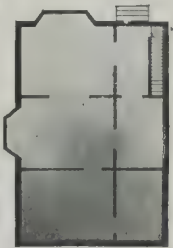
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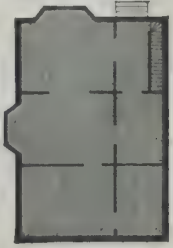
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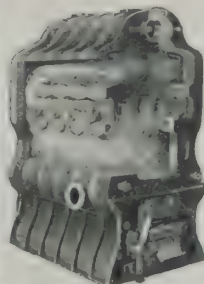


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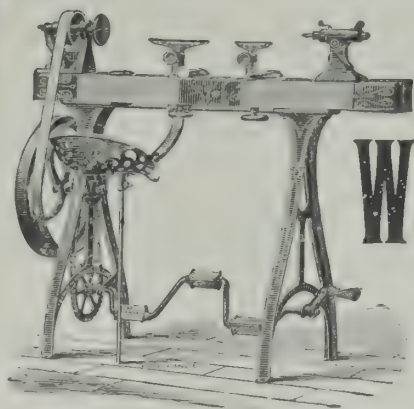
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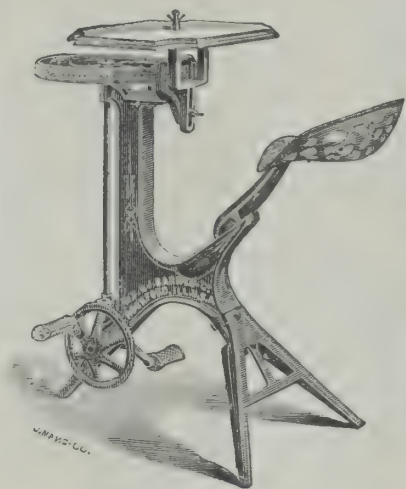
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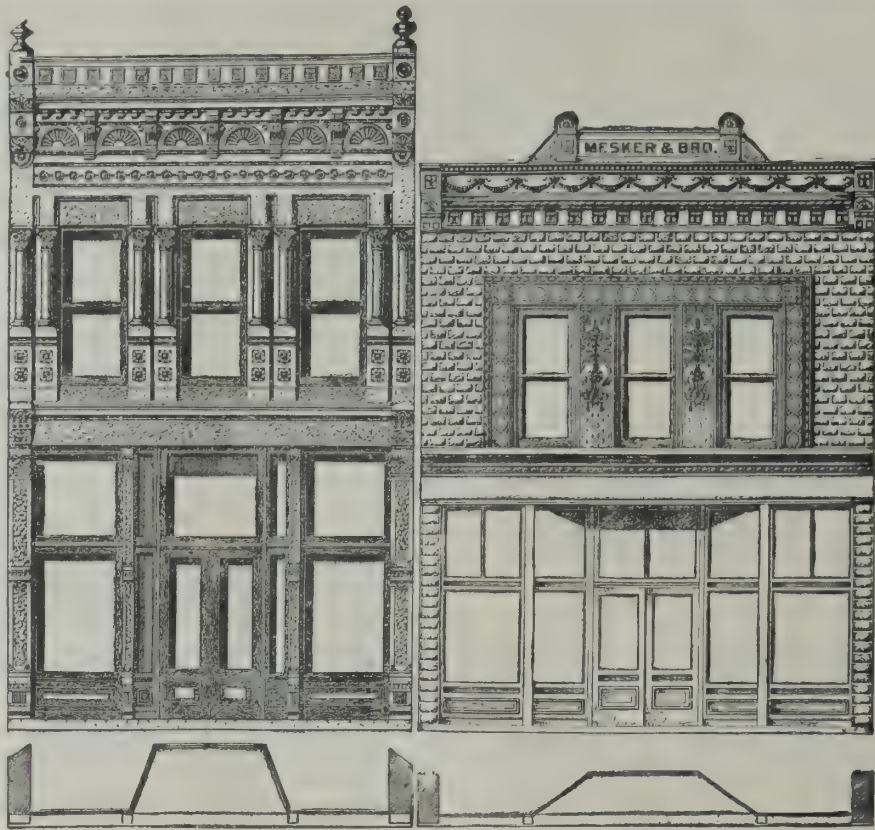
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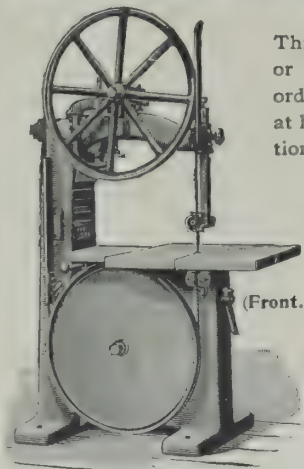
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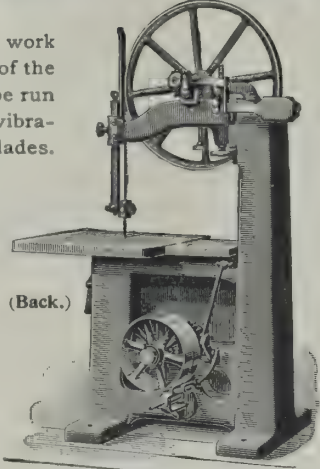
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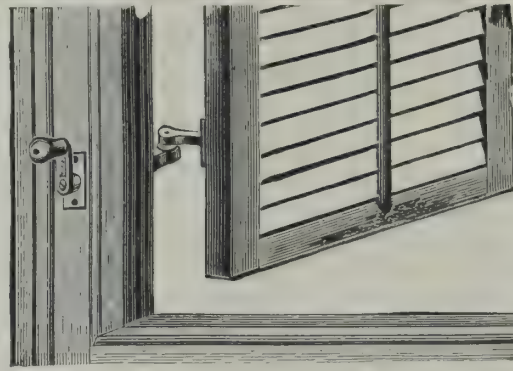
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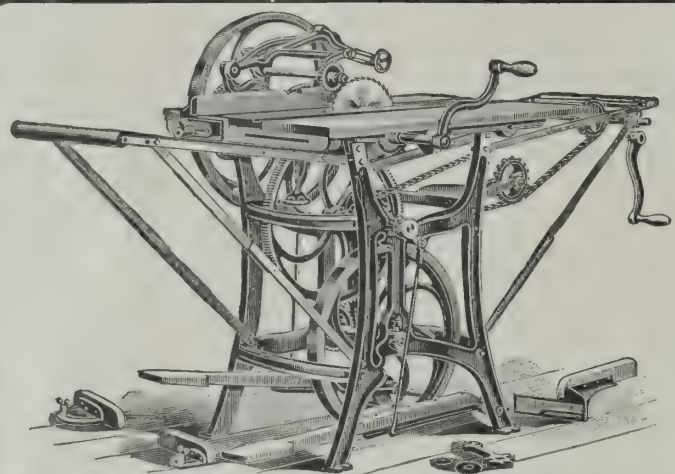


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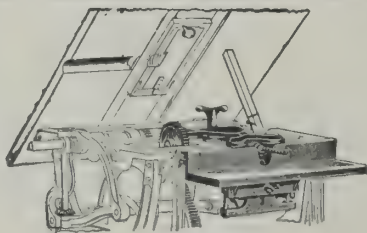


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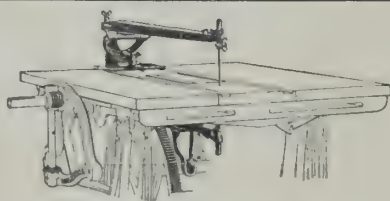


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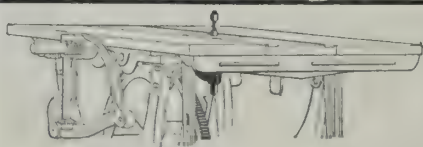
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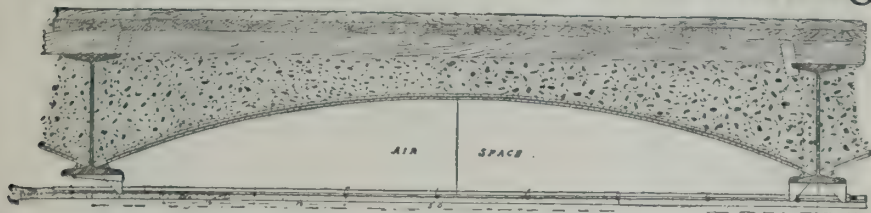
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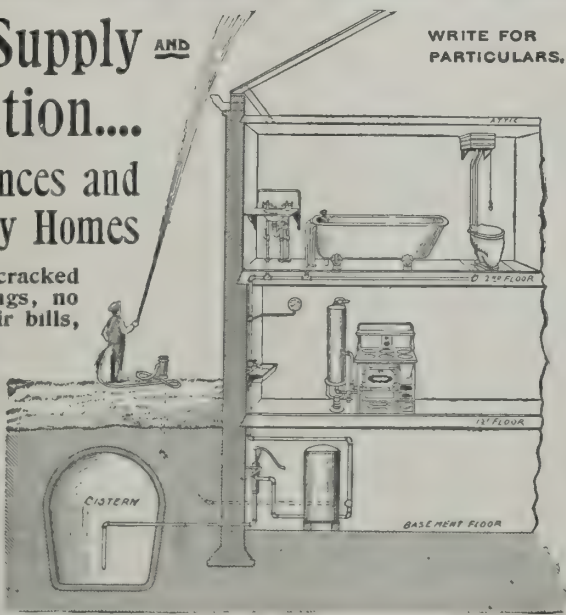
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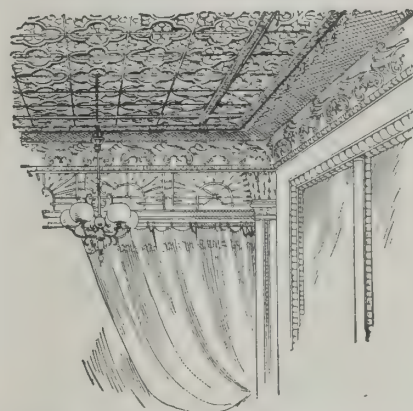


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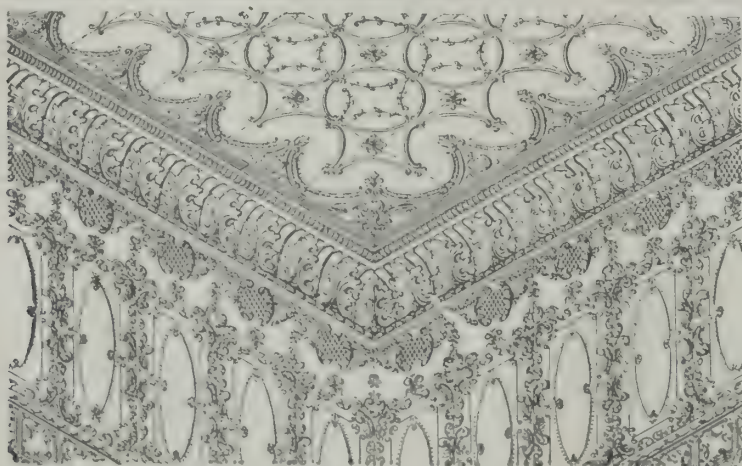
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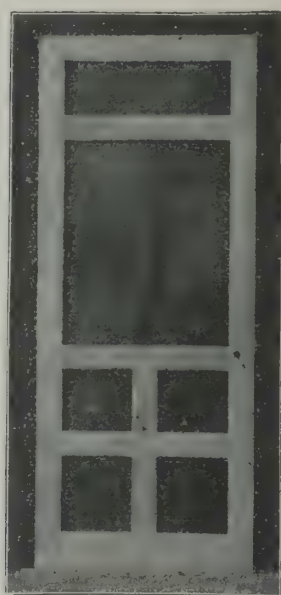
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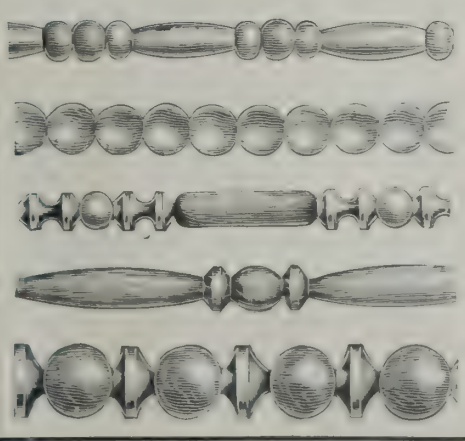
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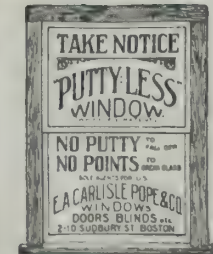
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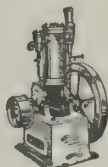
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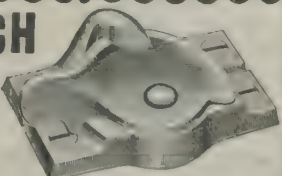
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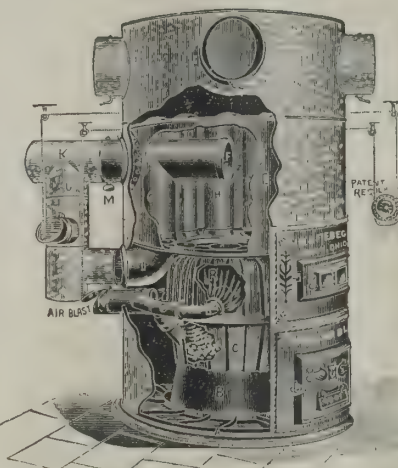
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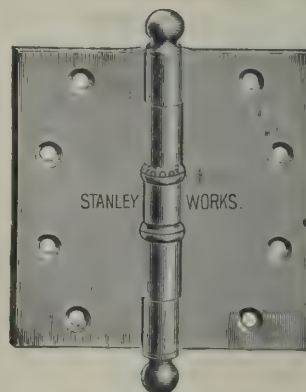
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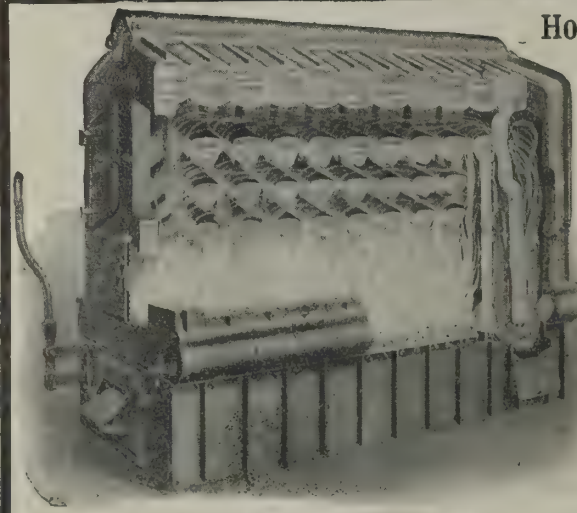
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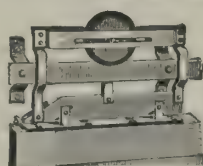
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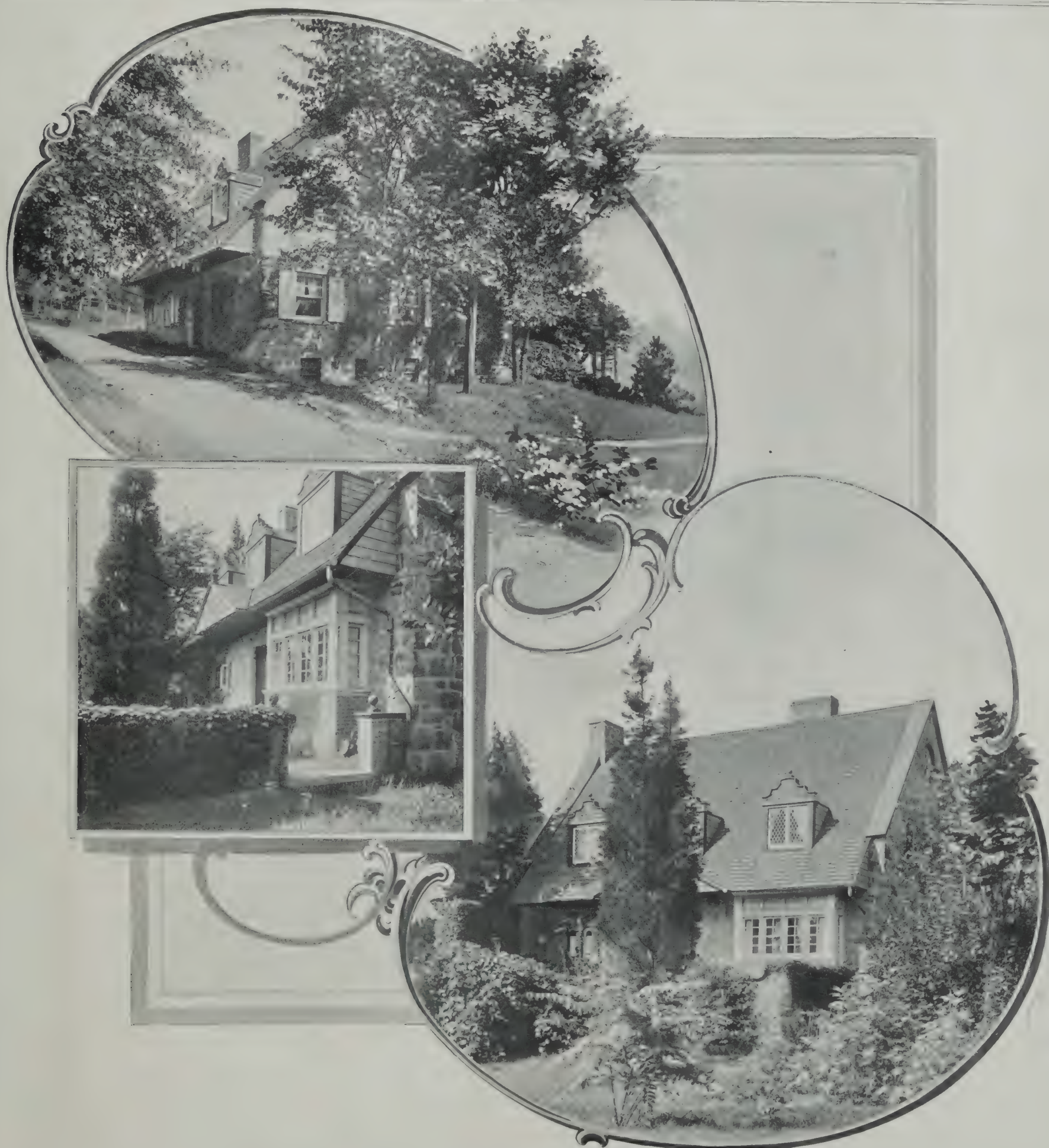
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A HOUSE WITH TREES: A RESIDENCE AT WYOMING, N. J.—See page 77.

MR. J. W. DOW, ARCHITECT.

SCIENTIFIC AMERICAN BUILDING MONTHLY

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MONTHLY COMMENT.

COUNTRY life should not be confounded with agriculture and horticulture. These are the material side of country existence of interest to the farmers and market-gardeners, but by no means the aspect of suburban existence that is taking the city people out into the country. The resident of a city does not feel called upon to engage in manual labor in a factory or a manufacturing establishment simply because he lives in a town; why, then, should one immediately plunge into the industries of the country because one purchases a suburban house and sets about enjoying the pure air and open fields of the country? Yet to many persons suburban life is identical with farm gardens and vegetable raising, and, the labor involved in such pursuits being somewhat considerable, a reaction follows, and the country life ceases to be the joy it was hoped it would become. A singular instance of the extent to which this strange notion prevails is supplied by a new periodical confessedly established to further country life, which has developed into an agricultural paper, singing the praises of new apples, the latest turnip, or the uttermost development of the onion. These are noble products it must be admitted, but the city man is not always fitted to understand the delight of their cultivation. As a matter of fact no farmer raises vegetables, tends cows, and conducts the laborious operations of a farm for the pleasure it gives. With him it is a business quite as much as the hours spent in an office or over a counter. There is no reason at all why a city man, moving out to the country, should immediately plunge into the business of the country, when, it is to be hoped, he already has a city business he thoroughly understands.

An important drawback to the permanency of country life is the lack of permanency in suburban developments. A new settlement is started. Its advantages are set forth in glowing terms. Its convenience

of access, the trolley lines in existence or about to be set running, its city delivery service, its pure water,—the many things the successful advertising man knows how to combine in an alluring fashion, are presented in the most attractive manner possible. Sample houses are built, others are added, and the new settlement seems on the high road to prosperity. And then comes a lull. Not so many circulars are issued. Not so many men are employed to keep up the common grounds. Roads fall into disrepair. Houses remain empty. Presently there is nothing doing.

The fact is, suburban real estate is not always a paying investment. Often marketed in good faith, the promoters frequently find the returns less than they expected, or perhaps they have realized all they expected to, and lesser care is taken. The original settlers are chained to the soil, and general dissatisfaction ensues. These conditions should not exist, but they do, and they exist within city suburban limits quite as much as in country districts farther removed from the great centers of population. Then come the tax assessors, with their strange notions of values and their constantly increasing ratios. This is perhaps the most distressful aspect of suburban life, and yet the possible effect of the tax gatherers is often ignored by eager purchasers. It is one of the aspects of country living that should be carefully looked into before one establishes oneself.

Taxation is likely to become, in the near future, a much more serious part of the problem of living, both in the city and the country, than may now be realized. Year after year our great cities pile up mountains of indebtedness, which represent not only increased cost to the citizens but increased values. The latter aspect of real estate ownership is very gratifying to the property-holder, but the former must, sooner or later, have its effect on the trend of population to the cities. Six years ago the debt of Chicago was \$17,700,000; it has now grown \$9,000,000 more, to \$26,700,000. Boston's debt six years ago was \$35,000,000, now it is \$56,000,000. In 1896 the debt of Cleveland was \$6,400,000; now it is \$9,300,000. Kansas City owed then \$900,000, and now \$4,500,000—an increase of 50 per cent. Detroit then owed \$2,100,000, and now \$4,700,000. Louisville then had a debt of \$3,800,000, while now it is \$8,300,000. Hartford, in the same period, jumped from \$930,000 to \$3,000,000, and Jersey City from \$4,600,000 to \$16,300,000. The interest on these huge sums must be met by taxation. The money must be obtained somehow. Perhaps, in time, living in the city will be too costly for every one except the very rich and the very poor. The latter may be so wretched that they may escape taxation, and the former may be so wealthy that they can afford to live wherever taxes are lowest. How, then, are these great debts to be paid off?

Another great fire calamity has visited New York in the destruction of the Park Avenue Hotel. This catastrophe was particularly painful and atrocious because it was quite unnecessary, and no lives would have been lost had proper warning been given the inmates and proper apparatus and means of escape been supplied. Perfect safety seems to have been felt for the building until it was too late, and then many people were unnecessarily roasted alive and many others injured. The fact is, the safety of human life is now the most important problem before the American people. Protection from injury by fire, from death by dynamite explosion, and from railway accidents has become so pressingly urgent that it would seem no other problem could be discussed in the metropolis, or, indeed, in any community in which many people are gathered together. Like the other disasters to which reference has been made in these pages, the Park Avenue fire entailed injuries and losses that should not have happened. These problems call not only for discussion, but for immediate action by the civic authorities.

Is the parlor to go? Why not? Of all rooms in the house it is used the least, it contains more unnecessary articles, and has cost the most in its furnishings. Economy in construction is a prime essential in all house building; why, then, give up the best part of the house to a room that is seldom used and which has little value to the family? A house is intended for the persons living in it. It should be planned and built for that purpose and for no other. Every room should have a definite use and a definite value, and all unnecessary features should be omitted. Persons of wealth and those who entertain largely have proper use for parlors and drawing-rooms. Those less amply endowed with means do not require them save on at occasional times. Every parlor represents a considerable cost both of capital and interest, and unless that can be well afforded the room should be stricken from the house plan. In most houses a well planned, ample kitchen is of infinite more value than the most luxurious parlor.

Women have long been knocking at the door of architecture and urging their claims, and their superior claims, if you please, for consideration as architects.

The object of all work and of all art is to do something well. Goodness and excellence are the test of effort, not the sex of the person making it. Architecture has, until the last few years, been wholly practised by men. It may not be a manly art, but if the question of sex is to be considered it may be well to note that every step of progress made to date has been made by men. It is, therefore, perhaps not unnatural that men should be disposed to regard the claims of lady architects as having little rational foundation. On the other hand, if men can not maintain their position as leaders in architecture against the competition of women they must expect to retire and be retired. But let no woman enter the field of architecture because she deems it "easy" or a light, graceful occupation that she can follow without soiling her hands. Few professions offer greater difficulties to its practitioners, and in few are the rewards so small in proportion to the effort put forth.

The fine decorative panel from the exhibition of the Architectural League, reproduced on page 43 of the March number, was designed and painted by Mr. Charles M. Shean. It is similar in style and treatment to the series of panels the same artist executed for the new dining-room of the Hotel Manhattan, New York.

THE HOUSE AND THE TERRACE.

THAT a house is built on a foundation is a fact perfectly well known. The adjustment of the superstructure to the foundation is, however, a matter calling for various treatment which is more or less of value in the effect of the building. A base is often quite as necessary to a house as a pedestal to a statue; and it has this advantage, that when it is employed the superstructure is erected on an apparent foundation. There may be a certain satisfaction in thus giving visible evidence of the structure of the house; and yet the portion of the foundation that appears above the ground is, strictly speaking, a part of the superstructure from a constructional standpoint.

But it is frequently necessary to elevate a house some little distance above the ground, and an artistic device is then necessary not only to conceal this upper foundation as it may be called, but also to adjust the relationship of the design to the surface of the ground. A terrace treatment is a natural and delightful form when it can be introduced. A terrace is more than a mere platform, but is a part of the house or a part of the grounds adjusted to the structure and design of the house, helping it with the beauty, concealing and enveloping the rude juncture with the ground, setting the building on a base from which it grows, and which both sets it off and adorns it.

The terrace immediately associated with the house, a part of its design, built, as likely as not, of the same material, has, therefore a function in design that is quite distinct and eminently helpful. It is because of this that it has artistic usefulness and artistic significance. But a terrace, to be a success, must be more than a base to a building. It must have reason and utility in its construction. It must be necessary as well as beautiful.

A terrace is only properly an adjunct of the small houses generally built in America when the house is built on falling ground. A house must not seem to be planted on its base, but the base must be the natural result of the structure and the land on which the house is built. A building so vast that it is difficult to take in the whole front with a single glance of the eye may, perhaps, be raised on a base with excellent artistic effect; but in a small house the result is unpleasant and, if unnecessary, likely to be unsightly.

A small house built on falling ground, however, needs a support. A blank wall is unsightly; a terrace at once becomes the natural and proper form of treatment. And the terrace is quite as much a part of the house whether it immediately adjoins it or whether it precedes the porch that may be built above it. It is a part of the house so long as it is designed in conjunction with it and helps any part of it; it does not matter whether it be close to it or fifty or more feet away from it. And while a structural terrace is most often built of stone or brick, an earth terrace, covered with grass, has often a structural relationship to the dwelling as close and as intimate as one constructed of building materials.

Some interesting terraces are reproduced on page 67. They include one at Eastover, the residence of John Goodchild, Esq., Wyoming, N. J., designed by Mr. J. W. Dow, architect, Wyoming, N. J.; terrace at the rear of the residence of John G. Wright, Esq., Brookline, Mass., designed by Mr. H. S. Fraser, architect, Boston, Mass.; and the terrace in front of the residence of Thomas C. Wales, Esq., Hammond Street, Chestnut Hill, Mass., designed by Winslow & Bigelow, architects, Boston. They illustrate three types of terraces, very good in themselves, and charming parts of three excellent houses.

The illustrations are reproduced from photographs made especially for the BUILDING MONTHLY.

TALKS WITH ARCHITECTS.

No. 15. MR. JOHN GALEN HOWARD ON THE BEAUX-ARTS ARCHITECTS.

A BEAUX-ARTS architect is one who has had some training in the celebrated Ecole des Beaux-Arts in Paris, who accepts the doctrines there taught as fundamental and essential, and who follows out those principles in his practise, be his work large or small, monumental or domestic. The extraordinary vogue of the French School has produced a number of results, in this country, not a few of which are popularly regarded as direct results of Parisian training, yet which are actually due to the personality of the architect. Eccentricity of design, the deliberate transplanting of French models to American soil, the effort to be "fashionable" and up-to-date;—these and other idiosyncrasies are individual traits, are the result of the foreign training upon the individual, and should not be confounded with the more serious work of the more serious-minded architects, whose knowledge, ability and faith have been broadened by their studies under the carefully developed French system.

It is these men who regard the Paris training as the salvation of American architecture. To them the supreme advantage of that training is not the facility it gives in the use of orders, column entablatures, classical motifs and the like, but the breadth of view it gives, the power of sound planning, the ability to express the plan in design, the intimate union of the artistic and the practical that it develops. These are the fundamentals behind this great movement, it is on these it rests, and it is because of this that its influence has broadened throughout this vast country, and its fruits have multiplied in almost countless structures.

Superficially, that is, to the popular eye, the direct result of this movement has been the erection of a prodigious number of structures in the classic style adapted to all sorts of purposes. Business buildings and banks, city halls and country houses, private dwellings and stables, libraries, schools and work houses, everything the modern architect finds to do is treated in a classic way or with a semblance of classic motifs. No thoughtful student of our American architecture can fail to be impressed with the earnestness of much of this work, with its sometimes quiet beauty, its frequent stateliness, its clever adaptation of old artistic materials to new uses.

Mr. John Galen Howard is an architect who has been identified with Beaux-Arts work from the beginning of his architectural career. A man of fine training, of scholarly endowments, a master in design and a thorough artist—that much desired qualification of every architect—he is one of the most conspicuous Beaux-Arts architects in New York. His beautiful electric tower was one of the chief features of the Buffalo Exposition, and his work for the University of California and many important buildings in New York and other cities has brought him well merited fame.

"Architectural instruction in Paris," said Mr. Howard in response to my question, "has the great advantage of being conducted by practising architects. The intimate relation between the artistic and the constructional side is thus impressed upon the student in a more direct and forceful way than is possible under the American system, in which our young college men are generally trained by professors whose time is wholly consumed with instruction. With us instruction tends to grow apart from life."

"Yes," I rejoined, "and one of the strangest things in our American schools of architecture has been the

prevalence of young men as instructors. Young fellows who one day are students become full-blown instructors the next. I have always felt that here was an essential cause of weakness."

"True," replied Mr. Howard hopefully, "but perhaps, in time, we may have the French system here. We can never supplant the advantages of foreign travel, nor substitute anything to take the place of actual contact with the great monuments; but we may be able to bring our students at home in closer touch with the problems of architecture as they actually exist."

"The training in Paris is called academic, and it is so truly in one sense, since it is based on tradition, but it is not academic in the sense of being out of touch with actual life. If to say a work is academic is to say that it is separated from everyday life; formulated formal, cut and dried, then the Paris training is not academic. On the contrary, it is eager and full of life; it is opposed to copying and to formalism, but seeks to

in its multitudinous variations is doubtless having an extravagant vogue at the present time; but since it is after all the most beautiful of architectural creations, why not give the place of honor to so valuable a motif in a system of construction that aims at securing perfection in proportion? It is true enough the column is often used where it need not be, and perhaps we are suffering from a surfeit of this most valuable architectural element; but the use of the column is not a certificate of Beaux-Arts study nor of Beaux-Arts proficiency. Much distinctive Beaux-Arts work is being now done and has been done without it. In time it may quite cease to be regarded as a necessary feature of Beaux-Arts work."

And then the talk veered toward more general topics, and I asked Mr. Howard what the Beaux-Arts architects were doing for this country. His response was prompt and to the point.

"Working out its architectural salvation," he replied with a smile. "If I may make a comparison,

they have found an articulate word instead of unattached and meaningless sounds. The effort and the tendency of the Beaux-Arts School are to enable a man to express himself in architecture sanely and beautifully. One important advantage which our American students have undoubtedly lies in the fact that the majority of them go abroad after having had good previous training and having reached a certain maturity. Weak men are unquestionably helped by the School and enabled to do acceptable work, even if it is not original. And the man of great native talent is also helped, and to an even greater degree, for the end and aim of the instruction there is to bring out each man's personal power and put it to the best use.

"The School in Paris is a great organism, progressing from year to year; it changes its superficial aspects, changes its accents, changes even it may be its general attitude toward life and art; and yet the fundamental principles are permanent. It holds to the eternal principle which was the reason for its founding, and is the explanation of its continued development. Its supremely strong point is that while its work to-day may differ from its work of twenty-five, fifty, or more years ago, it is still searching, ever searching for the truth."

I referred to the distinctive quality of modern English classic work, which, while classic, is unmistakably English and distinctive. Mr. Howard agreed that this was so, and that much of this work was of great interest. But, he pointed out,

this character of English work was the result of many centuries' previous effort, interrupted by the Victorian Gothic revival, but nevertheless continuous with earlier efforts.

"We in this country," he continued, "may get to that. Now we are too near to the beginnings. Men want to get rid of the architectural slang of the school, and keep to the principles they have learned. Beaux-Arts work concentrates interest in one field. It tends to develop convictions. The architect with the strongest convictions is the one who will accomplish the best work. And the man who produces the best work in the classic is the one who views it as the one and only form of artistic expression. Classic art is common property and part of the heritage of the ages. It belongs to no time and to no people. It is ours as much as it is French or English, German or Italian."

"The Beaux-Arts architect is a man of convictions, strongly developed and thoroughly grounded. And if to his convictions is added a large amount of general culture, the better it is for him and for other people."

BARR FERREE.



VIEW OF ENTRANCE PORCH, MILBANK LIBRARY, GREENWICH, CONN.—See page 76.

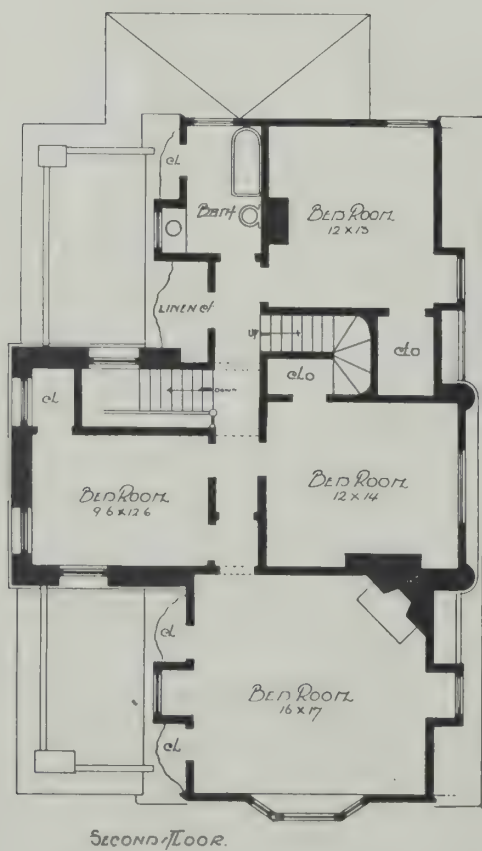
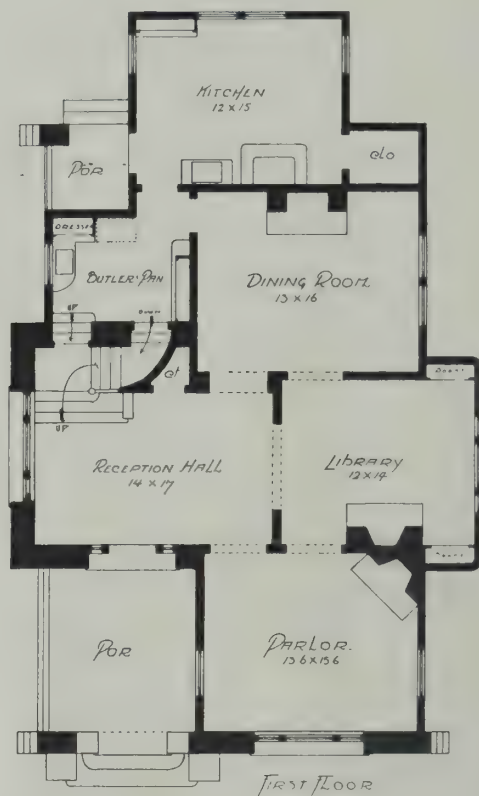
draw out the best there is in every man. It aims to get the personal element of each problem into his work.

"It is most essential that pupils be brought in contact with real work from the beginning. This is the only way in which they can be brought to see and to understand the real relationship between the artistic and structural aspects of any building problem. We teach science and art separately in this country, and their inter-relationship is hardly touched on."

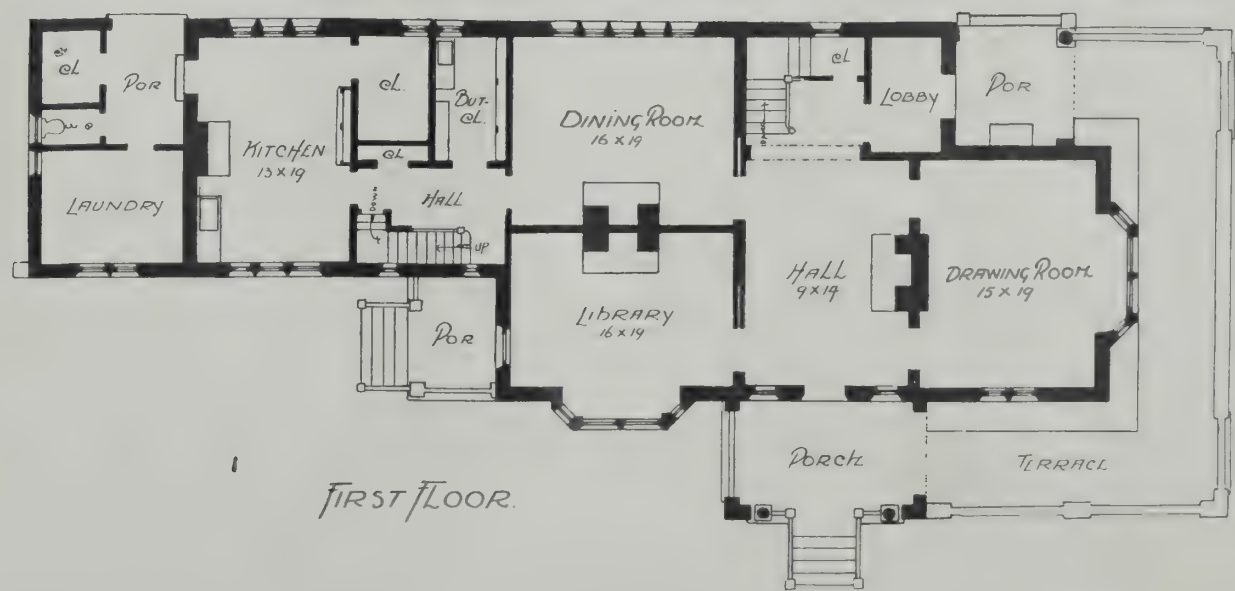
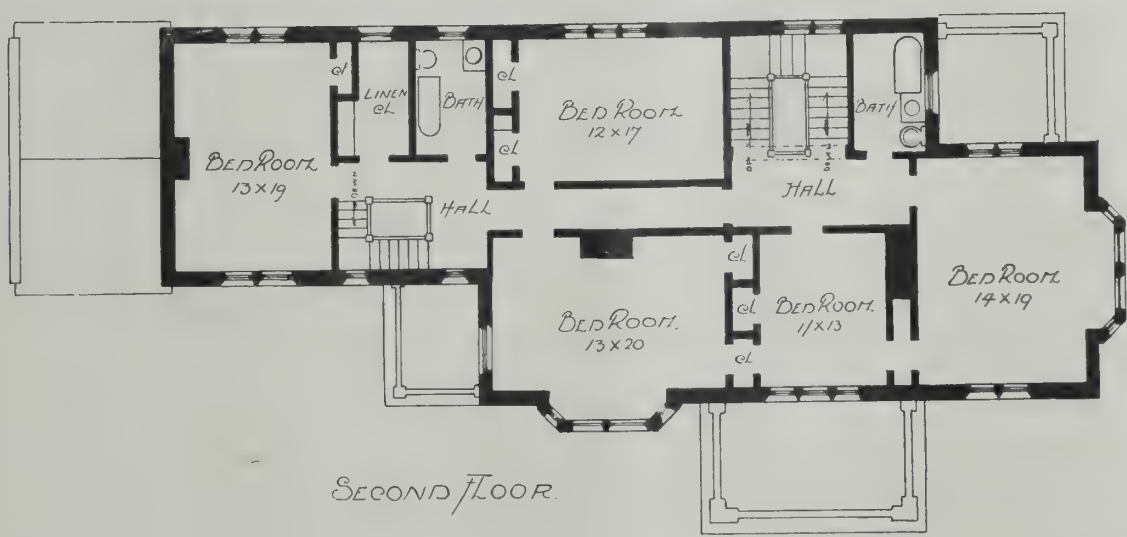
"The Paris training is frankly based on the classic; the column, the entablature and other elements of classic art form the keynote of design and of instruction. The column is in a way the basis in construction. It takes the part, in architecture, of a human being in civilization. It is full of individuality and distinctiveness, it has charm and fitness. It may fairly be said that two columns are as much alike—and as different—as two human beings."

"But may we not have too many columns?" I asked.

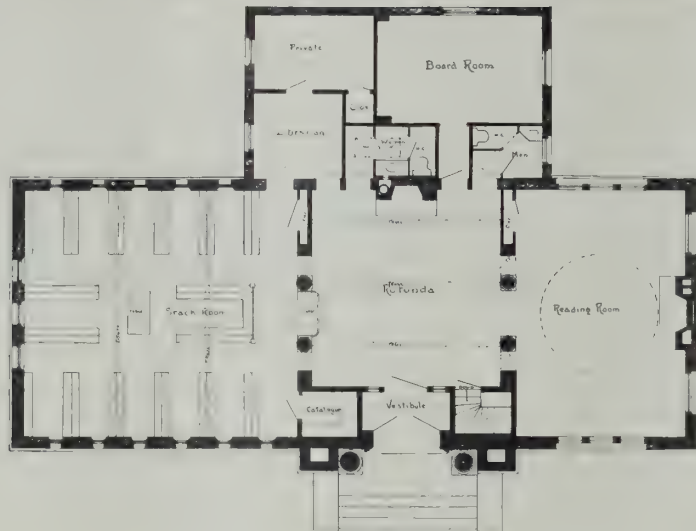
"One immediate result of the Chicago Fair," was the reply, "has been a vast popularity of the column, both with the designer and the people. The classic column



ADWELLING AT PARK HILL, N. Y.—See page 76.
MR. FRANK W. BEALL, ARCHITECT.



A RESIDENCE AT OGONTZ, PA.—See page 76.
MR. HORACE TRUMBAUER, ARCHITECT.



Ground Floor Plan

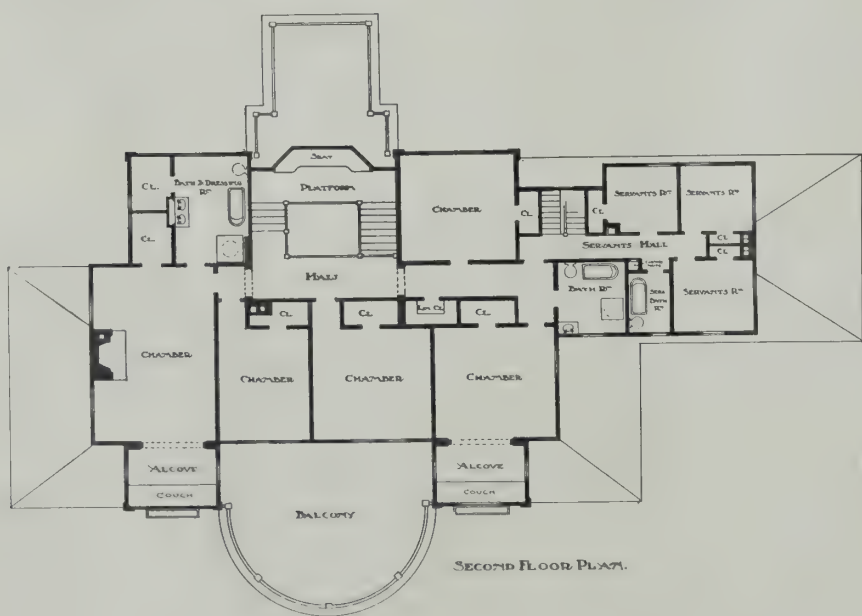


MILBANK LIBRARY, GREENWICH, CONN.—See page 76.

MR. CHARLES A. RICH, ARCHITECT.



1. Terrace at the Rear of "Eastover," the Residence of John Goodchild, Esq., at Wyoming, N. J. Mr. J. W. Dow, Architect, Wyoming, N. J.
2. Terrace in Front of Residence of Thomas C. Wales, Esq., Chestnut Hill, Mass. Designed by Winslow & Bigelow, Architects, Boston, Mass.
3. Terrace at the Rear of the Residence of John G. Wright, Esq., at Chestnut Hill, Mass. Designed by Mr. H. S. Fraser, Architect, Boston, Mass.



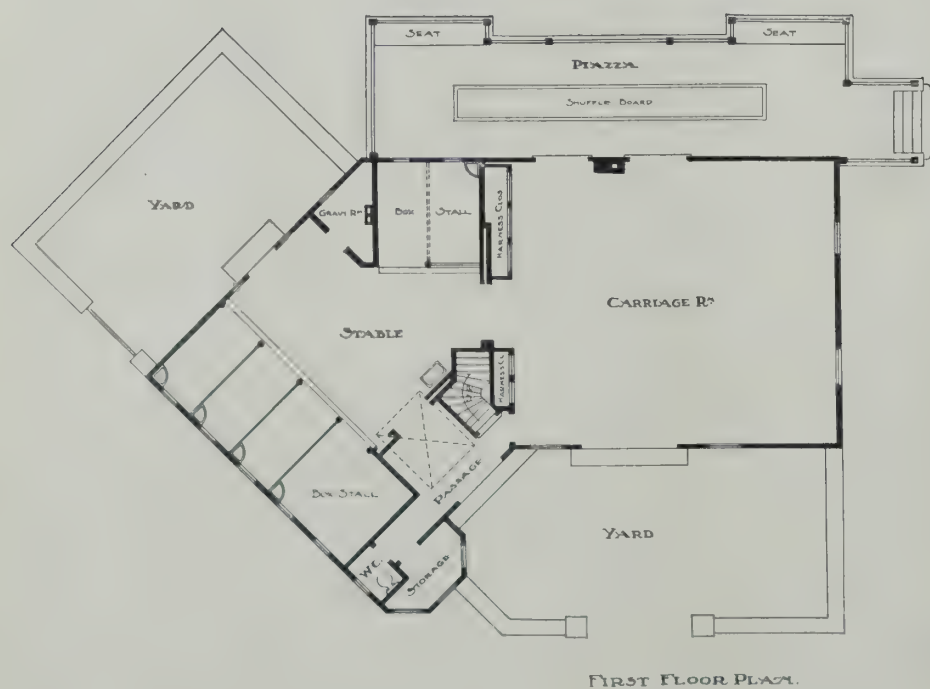
"KEIR KNOLL," LARCHMONT, N. Y.—See page 76.

MR. FRANK A. MOORE, ARCHITECT.

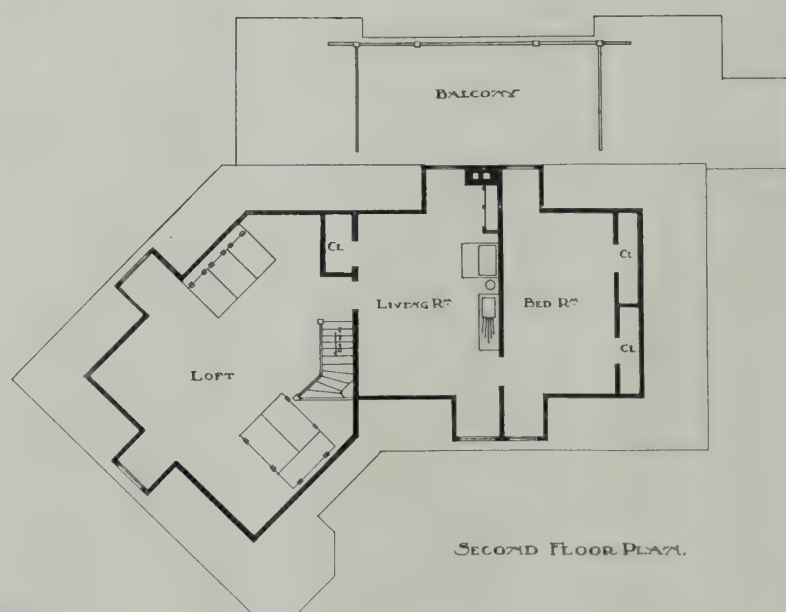


"KEIR KNOLL," LARCHMONT, N. Y.—See page 76.

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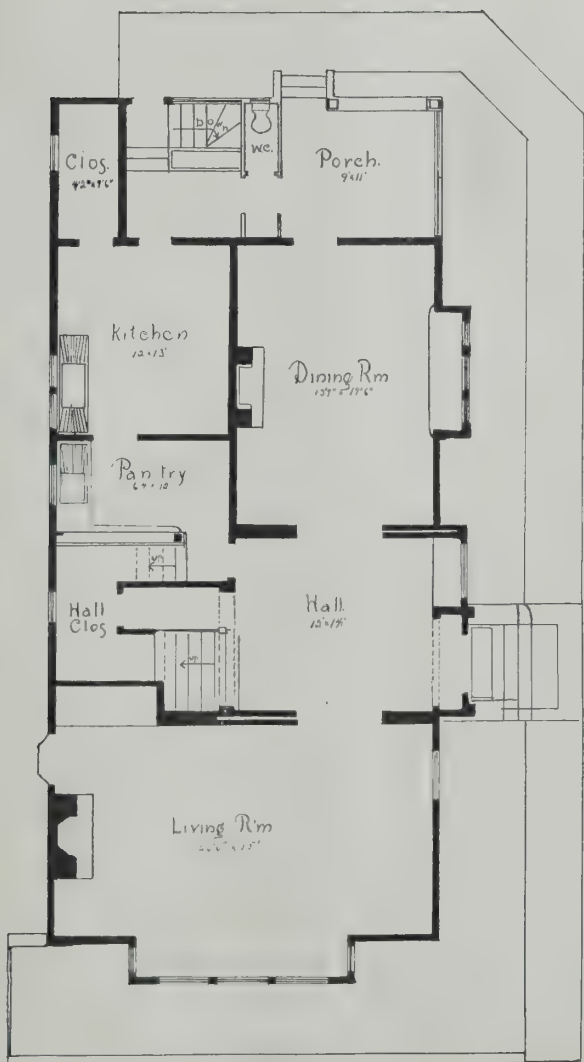
FIRST FLOOR PLAN.



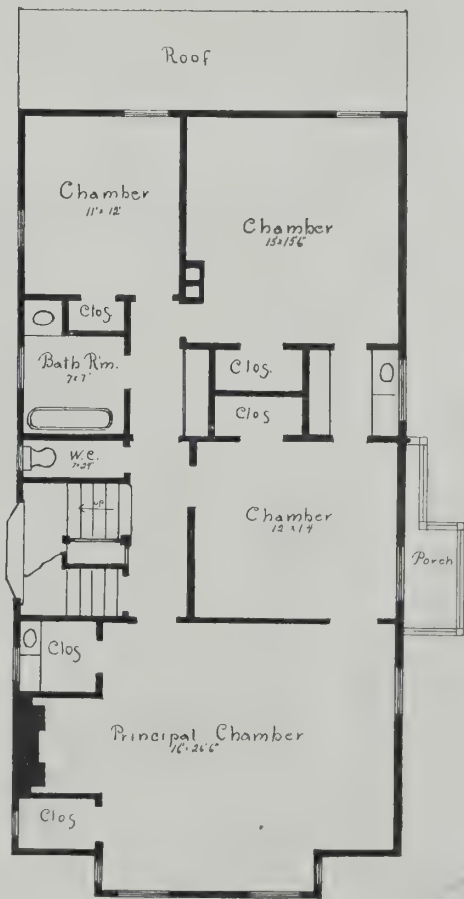
SECOND FLOOR PLAN.

A STABLE AT LARCHMONT, N. Y.—See page 76.

MR. FRANK A. MOORE, ARCHITECT.



First Floor.



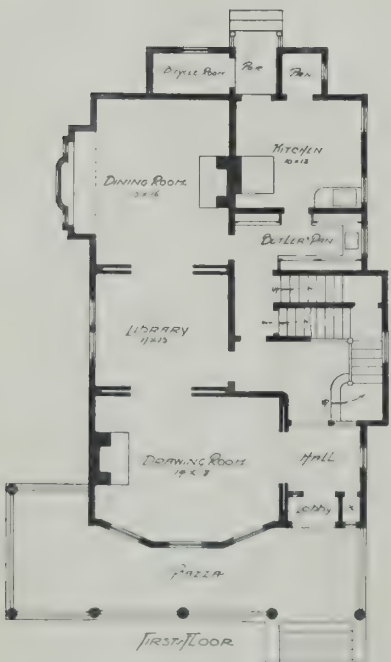
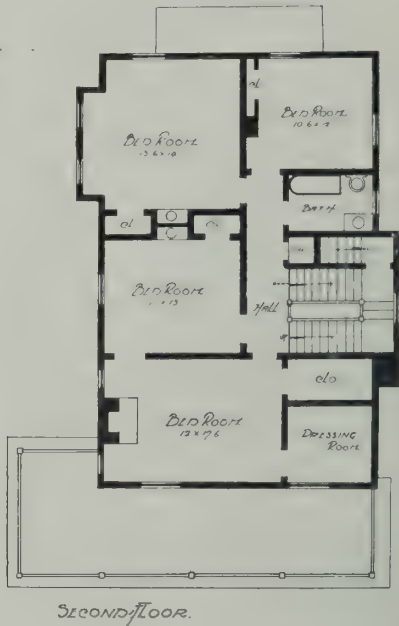
Second Floor.

A RESIDENCE AT ALAMEDA, CAL.—See page 76.
MR. MAXWELL G. RUGBEE, ARCHITECT.





“ROCKHILL,” A SUMMER DWELLING AT SOUND BEACH, CONN.—See page 76.
MR. HERBERT LUCAS, ARCHITECT.



A COLONIAL HOUSE AT FLATBUSH, L. I.—See page 77

MR. JOHN J. PETIT, ARCHITECT.

CIVIC BETTERMENT.

THE improvement of our cities and towns, which is now being proposed in every quarter under the misleading name of municipal art, is one of the most important of the many problems that confront those really interested in their general environment. By general environment is meant one's civic surroundings beyond the limits of one's own home or one's own grounds. It is no longer sufficient for the good citizen to take care of his own property; but he must see that the town, village, or city in which he lives is, as a whole, a fit place to live in, clean, attractive, pleasant, and healthy.

Not very much can be accomplished by individual effort. There is a certain community of interests that arises in every aggregation of human beings, whether great or small, that implies common interests. It is obviously impossible to expect A to keep a clean roadway before his house when B, his next door neighbor, is utterly indifferent to what is without his own property. But while there are many B's in the world, they have now learned that it is money in pocket for

small town has been more successful, and the various improvement societies have produced really remarkable successes in many instances. And one of these has been the rise in real estate values, which has completely demonstrated the value of civic betterment, and convinced even the most doubting of the practical utility of the new movement.

And that is what we need, civic betterment. Municipal art is a wholly different problem, and bids fair, at the present time, to limit itself to the creation of isolated works of art which can have little to do with the general health and aspect of the city. And, after all, municipal betterment is largely a matter of health, both of the body and of the mind. Aspects of civic beauty, as Paris long since has shown, are valuable and profitable; but aspects of public health and sanitation, if not so beautiful, are at least more useful.

The first end and aim of any community, of any town, great or small, should be to be healthful. It must be made fit to live in, and health comes first all the time. Other things may follow, and, as a matter of fact, do follow, naturally and in due order,

but the former includes the latter, which, after all, is but a single item in a great movement embracing many interests and capable of great results.

MODERN DECORATION.

TRUSTWORTHY decorators were very much needed to-day, remarked Mr. G. C. Haité in a recent discussion, and it behooved every master-decorator and every workman to make himself trustworthy. There ought to be the desire on the part of every decorator to do better work than his rivals; and such a desire was laudable. He should always be ready to learn and be open to conviction, but very slow to adopt eccentricities. The connection between architecture and decoration was also of the greatest importance, and decorators should carefully study this relationship. Unfortunately, in many cases of domestic decoration with which one had to deal there was no architecture worthy of the name; and to that extent the decorator had nothing to work upon. This brought one face to face with the fact that the architect often entirely ignored the decorator and his work, and by his influence re-



ENTRANCE—"LYNN REGIS," A RESIDENCE AT WYOMING, N. J.
—See page 77.



ENTRANCE—A RESIDENCE OF THE AMERICAN REAL ESTATE CO.,
AT PARK HILL, N. Y.—See page 77.

citizens to unite in municipal improvement associations for the common good. A community that progresses on indefinite lines and which is without the inspiration of public spirited citizens to support any movement looking to the public good, is less developed, after a few years of growth, than one in which all forces have been brought to the realization of the value of coöperation.

For very many years the world has had a most conspicuous example of public decoration and general external improvement in the city of Paris, which was redeemed and modernized by more drastic methods than are likely ever to be applied to an American municipality. But Paris has long, by its many charms, its fine streets, its parks and gardens, its regular buildings, its imposing public edifices, been a standing example and reproach to other cities which failed to realize the value of municipal apparel and were content to let the individual citizens do what they pleased, with the result that very little has been done.

In America, the movement has been more successful in small towns and villages than in great cities. The interests of our large cities are so varied, the demands on the stoutest of public treasuries are so great, the interests of political parties sometimes have such strange results from the citizen's standpoint, that not much has, on the whole, been accomplished. The

but the place must be, above all, healthy or people will not come to live in it; or, if once settled there, will take the earliest opportunity of moving away. Civic betterment, then, begins with the health, and the boards of health, with their rapidly increasing powers, as interpreted by the latest application of its methods, are at the foundation of all efforts of this sort.

Another important step is the coördination of all parties and interests in one movement. This is too often overlooked. Many communities that have no organization created avowedly to improve the place already possess much of the machinery for such improvement in the civic bodies providing for its government and care; but which are too frequently ignored in the inspiring first movements of the improvement association. It is quite as necessary for all hands to get together in civic betterment as it is in any manufacturing industry that seeks to accomplish great work by controlling an entire output. We do not need the multiplication of directing and suggesting bodies so much as we need the coöperation of every possible interest. When the problem is attacked in this broad way the results are likely to be vastly more satisfactory and much more rapid. And as a first step to this coördination should be a realization that the real problem is civic betterment and not municipal art. The two terms are not opposed to each other,

tarded the progress of decorative art instead of advancing it as he should.

There was much that was repulsive to good taste in the misapplication of the principles of form and color in pictorial and decorative art, in jewelry, and even in advertising posters. It really seemed in the last direction that an official censorship was necessary. It was anomalous that we should have a censorship of plays, for instance, and no supervision of what passed as art in many of our public places.

WATER SUPPLY OF PITTSBURG.

The city of Pittsburg has long been suffering from an inadequate and improper water supply. A new move toward bettering it has recently been made by the fire insurance companies, who have added a considerable percentage to their fire risks in the downtown business portions until fire pumps and hydrants satisfactory to them have been installed. This is a new way to bring about water improvement, and it is one that is likely to produce very early results. Agitation in such matters has its use, but action is better, and it would seem that, in this case, a practical direction has been given to the subject of an important municipal reform which may have results of great value. The effects of this new movement will be watched with interest.

A DWELLING AT PARK HILL, N. Y.

THE dwelling which is the subject of the illustration on page 64 has recently been erected for the American Real Estate Company at Park Hill, N. Y. The entire north tower and the front elevation of the first story are built of local blue rubble stone; the broad, arched windows and buttresses presenting a heavy rustic effect, very pleasing in contrast with the shinglework used elsewhere on the exterior, except in the gable ends, which are timbered and finished in stucco panels suggesting Old English. The open terrace which extends across the front, with its turned balustrade, presents an imposing approach to the covered porch beyond. The body coloring is a moss-green stain, the roof a dark red, while the stucco panels of gables are an old oak brown, with the timbered work a dark green. The trimmings are painted a cream white. Dimensions: Front, 34 ft.; side, 53 ft., exclusive of porch. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The plan is compact, with all the main rooms communicating by wide openings and permitting an attractive vista from every point of view. The reception-hall and dining-room are finished in oak, the library in birch (mahogany stained), and the parlor in cream enamel. The three principal rooms are provided with open fireplaces, furnished with tiled hearths and facings, and mantels of Colonial style. The reception-hall contains the main staircase, with its broad easy risers and its ornamental newel posts and balustrades. The library is provided with a cluster of leaded glass windows and bookcases built in. A spacious kitchen, large, well-appointed butler's pantry, contain all the usual conveniences. There are four good bedrooms and a bathroom on the second floor, and three bedrooms and a trunkroom on the third floor. The plumbing of the bathroom and elsewhere throughout is of the best sanitary open set pattern, with all pipes nickel-plated. The cemented cellar contains a furnace, laundry, cold storage, coal and wood bins. The house is supplied with speaking tubes, electric bells, and gas fixtures complete. Mr. Frank W. Beall, architect, Sherwood Studio Building, 58 West Fifty-seventh Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT OGONTZ, PA.

We present on the cover and also on page 65 a residence which has recently been erected for Mr. William L. Elkins, Jr., at Ogontz, Pa. The building is treated in the Elizabethan style of architecture, and an attractive feature of the exterior is the terrace surrounding three sides of the building, which is provided with a heavy balustrade. The building is constructed on a stone foundation, and is built from grade line to peak with washed brick, laid with a Flemish bond in white mortar. The trimmings are of Indiana limestone, except the balustrade to the terrace and porch. The roof is covered with slate. Dimensions: Front, 92 ft. 4 in.; side, 32 ft. 2 in., not including terrace and porches. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The interior arrangement is most complete, and it is trimmed throughout with white pine, and treated with white enamel in the principal rooms on the first floor and in bedrooms. The hall has a paneled wainscoting, and it contains an ornamental staircase, and an open fireplace furnished with a tiled hearth and facings, and a mantel of stately design. The drawing-room has a bay window and a chimney breast, provided with a mantel of Colonial style and tiled facings. The library and dining-room are conveniently located, and they have open fireplaces, provided with tiled trimmings and facings and mantels. The dining-room has a paneled wainscoting and a modern cornice. The butler's pantry is conveniently fitted up with drawers, cupboards, and sink. The rear hall is provided with a staircase leading to the second and third stories, and to the cellar. The kitchen is provided with a large store pantry, range, sink, dresser, laundry with set tubs, covered porch, with coal bins, and servants' closets. The second story contains five bedrooms, seven closets, linen closet, and two bathrooms. These rooms are treated with white enamel. The bathrooms are furnished with porcelain fixtures and exposed nickelplated plumbing. There are two bedrooms and a trunkroom on the third floor. There is a cemented cellar under the entire house, and it contains two furnaces, coal and wood bins, cold storage, and a store cellar. Mr. Horace Trumbauer, architect, 1408 Land Title Building, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

MILBANK LIBRARY, GREENWICH, CONN.

THE Milbank Library, illustrated on pages 63 and 66, is a gift to the town of Greenwich from Mrs. A. A. Anderson as a memorial to her mother, the late Mrs. Jeremiah Milbank. The basement is constructed of heavy blocks of light granite, and is surrounded by a

high single story of white brick with trimmings of Indiana limestone. The roof is covered with a deep red shingle tile. The entrance is approached by broad granite steps. The doorway is flanked on either side by heavy Ionic columns, with carved ornamental panel above. The doors of solid oak, handsomely carved, are ten feet in height. The rotunda, 20 ft. by 20 ft., has a vaulted roof with heavy pine trusses and girders, and a Roman brick fireplace with a lintel of Indiana limestone. Over the mantel is placed W. S. Hunt's "Flight of Night." The floor is laid with mosaic tile. To the right of the entrance there is a reading-room, and to the left the library and stackroom; each is separated from the rotunda by massive Ionic columns and balustrade. The reading-room has a barrel-vaulted ceiling, double and triple windows with leaded glass transoms, and an open fireplace built of Roman brick, with the facings and a hearth of the same. The mantel of oak is high and is supported on columns with Ionic caps; the space between the lintel at the opening of the fireplace and the mantel is filled in with mosaic work, showing both the seals of Greenwich and Connecticut. The stackroom contains five alcoves on each side, and practically two at the rear end, and is calculated to hold 16,000 volumes. These alcoves are lighted by a first tier of narrow windows and a second tier of triple windows, six by nine feet, which admit a flood of light. This stackroom is separated by the librarian's counter. As a reminder of the age when this Library Association was established the records show such fines imposed by former librarians as the following is an example: Greased five pages and dirtied two pages, fine, 14 cents. The librarian's room and private office are conveniently located, and also the Board of Managers' room. The toilet-rooms for men and women are fitted up with the best modern conveniences. The cellar contains the heating apparatus and ample storage room. Mr. Charles A. Rich, architect, 35 Nassau Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

"KEIR KNOLL," LARCHMONT, N. Y.

As shown by the illustrations on pages 68 and 69, "Keir Knoll," the residence of Joseph H. Sterling, Esq., Larchmont Harbor, Larchmont, N. Y., is built in the Colonial style adapted to modern requirements, and somewhat different in design from the formal and sedate old stone mansion of Keir, Scotland, from which the name descends to the present generation. The underpinning is built of the largest selected field stone obtainable, the corner-stone being a boulder measuring six feet in length by three feet in width, and containing in the small copper box which is neatly fitted into the underside of the stone a brief record of the Sterling family up to date, with a few other objects, such as current coins, clippings from local papers, etc., which will doubtless prove of interest to future generations should these records remain undisturbed as long as it is hoped they may. The house is clapboarded and painted a light straw yellow with white trimmings, which, with the dark green blinds, form an attractive contrast to the rich foliage of the numerous trees which surround it. The piazzas are spacious and arranged on the water front sides, from which come the prevailing breezes in summer. From the porte-cochère on one side of the house the wide hall extends the entire depth of the house, and, with the wide door openings into the other rooms on the first floor, make a spacious area well adapted for entertaining or for the general usages of a country house. The finish of the woodwork of the hall is white, with mahogany doors, stairway, mantel, and bookcases, the mantel being a reproduction of a mantel in the Palace of the Doges at Venice, somewhat reduced in scale, and bearing the Sterling coat of arms. The second story chambers are all finished in white, with the bathrooms tiled to a height of seven feet, and supplied with shower baths as well as bath tubs. The furniture and furnishings throughout are strictly in the Colonial style, most of the furniture being genuine old pieces; the brass knocker on the entrance door, which has been in the family for over a hundred years, is of unusually fine workmanship. The floors are of selected red birch two and one-quarter inches wide, with wax finish. One of the features of Mr. Sterling's grounds consists of two acres or more of made land, on the water front; earth filling being quite expensive and difficult to obtain in this locality, arrangements were made to obtain the earth which vessels coming from the other side of the ocean bring over here as ballast. This filling was delivered by scows towed up close to the shore at high tide, and Mr. Sterling can boast of a lawn made from earth brought from the British Isles, Holland, Belgium, and Mediterranean countries; also a fine bathing beach of white Rockaway sand is another object worthy of mention. Mr. Frank A. Moore, architect, Windsor Arcade, Fifth Avenue and Forty-seventh Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A STABLE AT LARCHMONT, N. Y.

THE stable recently completed for Joseph H. Sterling, Esq., at Larchmont, N. Y., is illustrated on page 70. The building is designed to correspond with the residence of Mr. Sterling's illustrated on pages 68 and 69. The stable and carriage house are erected on a stone foundation, while the superstructure is constructed of wood. The exterior framework is covered with matched sheathing, and then covered with clapboards, and painted Colonial yellow with white trimmings. The roof is covered with shingles and left to weather finish. An attractive feature is the enclosed yard at the entranceway, with its rough stone fence and posts. The plan shows a large carriage-room, provided with harness closets with sliding glass doors, beyond which there is an enclosed piazza, a sun parlor, provided with a shuffleboard, seats, and all necessary furniture; this piazza overhangs the waters of Long Island Sound. The stable contains two box-stalls and three single stalls, provided with the usual ornamental iron fixtures, etc. There is also a storeroom, grain-room, and enclosed yard. The walls and ceilings of these apartments are ceiled up with narrow beaded Georgia pine, finished with hard oil. The second story contains a living-room and bedroom for coachman and a loft for grain and hay supplies. Mr. Frank A. Moore, architect, Windsor Arcade, Forty-seventh Street and Fifth Avenue, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE IN ALAMEDA, CAL.

ALAMEDA, a residential suburb of San Francisco, is favorably situated on a long projection of land almost surrounded by the waters of the bay. Its position is favorable to architectural adornment, and there is no city of equal size in California where the residences display greater taste in conception or beauty in construction. The residence of Mr. G. A. Rosenberg, illustrated on page 71, is one of the latest completed, and is regarded as one of the most complete and finished in the community. It is two stories and attic in height, and contains in all eight apartments, besides two in the roof. The first story is of clinker brick, and above plastered with open beams. The roof is shingled. A neat entrance from the side with a tasty footing gives access to the interior. The two floors are finished in oak and curly maple; the attic, in mountain pine. The exterior dimensions are 27 ft. 6 in. by 60 ft. The house is plentifully supplied with all the appurtenances of modern requirements. The cost of the dwelling was \$6,000. The architect was Maxwell G. Rugbee, of San Francisco.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

"ROCKHILL," A SUMMER DWELLING AT SOUND BEACH, CONN.

THE summer dwelling presented on page 73 has recently been completed for Mr. Edwin J. Lucas at Sound Beach, Conn. The first story of the building and the balustrade and columns to the piazza are built of field stone, which are laid up with rough faces and in a random manner, the mortar joints being recessed far enough to give the appearance of being laid up without cement or mortar. The second and third stories are constructed of wood, and the exterior framework is covered with shingles, which are finished natural. The blinds and all trimmings are painted bottle-green. The roof is covered with shingles, and the whole stained and finished in a moss-green. Dimensions: Front, 34 ft. 6 in.; side, 36 ft. 6 in., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The hall and living-room are arranged as one apartment, the only separation being the massive columns and pilasters which rise from the floor to the ceiling and form an artistic effect. This hall and living-room are trimmed with white pine and treated with white enamel. The doors are of mahogany finish. The hall contains an ornamental staircase, with turned newel-posts, balusters and rail, and a paneled seat. The living-room contains an open fireplace built of Roman brick, with the hearth and facings of the same, and a mantel. The dining-room is finished natural. This room, living-room, and hall are provided with paneled wainscotings and ceiling beams. The butler's pantry and kitchen are provided with natural trim, and are furnished with all the modern conveniences. The lobby is large enough to admit ice-box, which is a convenience. The second story is trimmed with white pine and treated with white enamel. This floor contains five bedrooms, eight closets, and a bathroom, the latter being wainscoted and paved with tile, and furnished with Ronald & Johnson's porcelain fixtures and exposed nickel-plated plumbing. The third floor contains three bedrooms, treated the same as those on the second floor, and ample storage room. A cellar under the whole of the house is provided with a cemented bottom, a

furnace-room, coal and wood bins. Mr. Herbert Lucas, architect, St. James Building, 1133 Broadway, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A COLONIAL HOUSE AT FLATBUSH, L. I.

THE Colonial house illustrated on page 74 has recently been erected for the T. B. Ackerson Construction Co., of Flatbush, L. I. The underpinning is constructed of rock-faced bluestone. The building above is of wood, and the exterior framework is covered with matched sheathing, paper, and shingles throughout. This shinglework is stained a silvery gray color, and the trimmings are painted a cream white. The roof is covered with shingles and left to weather finish. Dimensions: Front, 32 ft.; side, 48 ft. 6 in., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft. 6 in.; second, 8 ft. 6 in.; third, 8 ft. The hall is trimmed with curly birch, and has a high base, wood cornice, and pilaster effect. The stair hall, with its ornamental staircase, which is lighted by a stained glass window, is separated from the entrance hall by an archway with columns and grillework effect. The drawing-room and library are trimmed with curly birch, and the former is provided with an open fireplace, trimmed with tiled facings and hearth, and a wooden mantel. The dining-room is trimmed with East India mahogany, and has a paneled wainscoting and ceiling beams, an attractive bay window with flower shelf, and an open fireplace, furnished with tile trimmings and mantel. The butler's pantry is furnished with sink, drawers, dressers, and cupboards complete. The kitchen is provided with a Graff Co.'s range, sink, store pantry, etc. The second floor contains four bedrooms, dressing-room, four closets, linen closet, and a bathroom furnished with Mott's porcelain fixtures and exposed plumbing. Two of the bedrooms are trimmed with sycamore, and the remainder with whitewood, and treated with hard oil. The third floor contains three bedrooms and a trunk room. A cemented cellar contains a Graff Co.'s hot-air furnace, ventilating system, coal and wood bins, and cold storage. Mr. John J. Petit, architect, 186 Remsen Street, Brooklyn, N. Y.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A HOUSE WITH TREES: A RESIDENCE AT WYOMING, N. J.

THE extremely beautiful country house at Wyoming, N. J., illustrated on page 61, is remarkable for its simple beauty, its grace of line and form, its old-time feeling, and above all, its surroundings of trees, shrubs, and vines. Delightful as this house is in itself, it is even more charming because of its immediate environment.

A country house without trees is, in fact, one of the most dolorous places in the world. The beauty of the country is not alone the fresher air one may obtain there, but the beauty of nature itself, which is exactly that of verdure and trees and shrubs. While it is doubtless true that a house built in a thick wood would be deprived of that sunlight which is so essential to healthy living, it is also true that every tree that can be saved to help a house should be preserved. A tree destroyed is a beauty lost, and a tree saved, if saved intelligently, is a beauty gained.

It is not the fortune of every country house to be so well situated with regard to trees and shrubs as the one under consideration; yet the lesson it teaches of the value of these adjuncts to the house is a very notable one, because here it is so finely illustrated. Nature has been helped, no doubt, to some extent, as it should be, and as is always desirable; but it has been helped naturally and gracefully. Everything here has been used to the utmost advantage. The house has been placed exactly where it will be most helped by the trees. The shrubbery is natural and without formal treatment, and yet kept within sufficient limits to decorate the house. And the house, in its turn, has been designed in a graceful style eminently fitted to its surroundings. It is a dwelling that must excite the liveliest interest, and which realizes to the full, the beauty of a house in the country. J. W. Dow, architect, Wyoming, N. J.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

TWO DOORWAYS.

Two recent doorways are illustrated on page 75. The upper engraving is from "Lynn Regis," a residence at Wyoming, N. J., built by Mr. J. W. Dow, architect. The lower illustration is from a dwelling at Park Hill, built by the American Real Estate Co.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

FIRE PROTECTION IN DWELLINGS.

ALL chimneys or flues should be built of good brick, preferably with double walls, or be lined with terracotta or fire clay, says The Chronicle. There should be a solid foundation, and the chimney should be allowed to settle firmly before being enclosed within a building. This point is important, because the chimney mass is liable to settle and draw away from that part supported by the roof-timbers and leave a dangerous crack at an unfrequented spot. The quality of the mortar used should, of course, be of the best. The bricks should be carefully pointed inside as well as outside of the flue. This is safer than the usual method of plastering the inside, because atmospheric conditions and chemical action due to combustion have a tendency to disintegrate the plaster. Interstices in the flue allow sparks to escape or soot to accumulate.

When it is impossible to build the chimney from the ground it should rest on a solid timber foundation and have not less than six courses of brick work at the base, cross-tied and bedded in good mortar. Never allow the use of flues built in unfrequented attics with stove pipes passing through the ceiling to them. Never allow the use of a flue built on the joists above the ceiling, with stove pipes entering it vertically. The use of cement or vitrified pipes for flues is just as dangerous.

Woodwork contiguous to chimneys should be framed around them, leaving at least two inches of cleared space. Iron smokestacks through wooden roofs should be kept clear for a space of at least one foot, and the woodwork should be protected by an iron sleeve or jacket having a hood of metal. Hearths should be built on brick arches, sprung from the chimney breast to the stringer, leaving a space of at least four inches between the top of the arch and the hearth-stone. The space should be filled with sand thoroughly tamped.

Stoves and stove pipes have in the last seventeen years been responsible for over 12,500 fires in dwellings, which have burned many more pieces of property, caused much loss of human life and wasted millions of dollars' worth of property. The most ordinary precautions will prevent the larger part of such fires. Protect all woodwork or lath and plaster finish, stove pipes, with plastering of bright tin or galvanized iron. Leave at least half an inch of open air space between the metal and the protected surface. Place brick platforms or iron pans on legs under each stove and extend them at least two feet in front of the ash pit.

Erect stove pipes so that the joints will overlap toward the stove; this will prevent the escape of sparks through imperfect joints. Clean them out frequently. Inspect them once in a while to see that corrosion, due to dampness or moisture, has not set in. Sometimes an apparently sound pipe will break under pressure of the fingers. When the pipe passes through the ceiling or floor, provide it with a metal collar or tube, with an inch of air space between the plates. Have the collar long enough to reach clear through. Do not forget that portion of the pipe which runs through the attic. Here the fire will start if you neglect a periodical inspection. Do not use wooden fireboards, and see that all unused pipe holes in chimneys are stopped with metal.

Next to defective flues, matches are the most pregnant cause of fires in dwellings; nearly 18,000 serious conflagrations have resulted from their careless use in seventeen years. Keep them away from children. In a majority of cases the children's lives or limbs depend upon following this injunction. Use the so-called "safety" match, which ignites only on the box, if you are wise. Use metal receptacles for burned and unburned matches in any event. Have a place for them away from draperies and all inflammable material and keep them in their place.

All flexible or swinging gas jets, exposing woodwork or curtains, should really be made rigid and stationary. If you will not do this, enclose your light in a wire cage, if near curtains or tapestry. If there is lath and plaster or woodwork not more than eighteen inches above the flame of a gas-jet, there is danger. Protect the inflammable part of the house with a metal or porcelain guard and leave at least an inch of open air space between the metal and the protected surface.

Boston has been alarmed over a yearly bill for broken glass in the windows of its schools. The fact was brought out in a discussion on the advisability of opening the school yards for play at other than during school hours. It is, however, an interesting piece of information as showing how very great must be the waste and damage in all communities from thoughtless conduct. Doubtless it is grist to the glassman, but any community will weary of supporting a member who exists solely by the injury done others. Moreover, the less glass broken, the more it will be used, for confidence will be felt in it.



CONTRIBUTORY NEGLIGENCE RESULTING IN INJURY.—A carpenter was employed to lay a floor directly under the hatchways of a five-story building. He complained that the place was dangerous because of hoisting in progress by defendants; but, on being told that it was dangerous, he replied that he was insured. He was injured by the fall of merchandise which slipped out of a sling while being hoisted up the hatchway. A safer place was available for him to work in. *Held*, that he was guilty of contributory negligence. *Kueckel vs. O'Connor et al.*, 73 N. Y. Supp. 546.

DEFECTIVE SCAFFOLDING.—Decedent's employer was employed to paint defendant's library. He did not tell defendant's superintendent that a scaffold would be necessary until he began work, when the superintendent, in response to a request for one, said that his carpenters were busy, and that decedent's employer would have to build one for himself, and that he would find material in certain places. Decedent's employer built the scaffold, using some boards belonging to defendant for certain parts, including ledger boards, and furnishing other material himself. *Held*, that a recovery could not be had for decedent's death, caused by the giving way of a ledger board made of unsuitable material, supporting the staging on which decedent was standing, on the ground that defendant agreed to furnish the staging, or that it invited him to use a staging to be furnished by decedent's employer when completed. *Callahan vs. Trustees of Phillips Academy*, 62 N. E. Rep. (Mass.) 260.

DESTRUCTION BY FIRE.—UNFINISHED WORK.—Where a plumber undertakes to make repairs on a hot-water heater, under an agreement to make the repairs and furnish materials at an advance of a specified per cent. on the price paid by him, and to charge a specified price per hour for the time spent in repairs, and the house containing the hot-water heater is burned before the work is entirely completed, the plumber may recover for the work performed and materials furnished, so far as they have been put in place, as the contract is not one to complete the work at a specified price. *Jean vs. Papi-neau*, Rap. Jud. Que. 19 C. S. (Can.) 438.

EXCESSIVE CLAIM OF LIEN.—In proceedings to distribute surplus moneys on foreclosure of a mortgage, the fact that the referee decided that one mechanic's lienor or his assignee had a prior claim over another such lienor, but that his claim of lien was in excess of the sum due, does not avoid the lien where there were no findings that the lien was wilfully and intentionally false. *American Mortg. Co. vs. Butler et al.*, 73 N. Y. Supp. 334.

HEATING APPARATUS.—GUARANTY.—The specifications annexed to and made part of a contract for a steam heating apparatus provided that: "The contractor is to guarantee that the apparatus will be ample to warm all the rooms in which radiators are placed to seventy degrees in zero weather, with not over five pounds per square inch on the boiler." *Held*, that by the execution of this contract the contractor guaranteed this result. *North Bergen Board of Education vs. Jaeger et al.*, 50 At. Rep. (N. J.) 583.

NOT A FELLOW SERVANT.—Where complaint alleged that plaintiff, while on defendants' premises at the latter's request for the purpose of doing certain tinsmith work on the roof, sustained injuries through defendants' negligence, a contention that the complaint showed that plaintiff was in defendants' employ was not meritorious. *Barowski vs. Schultz et al.*, 88 N. W. Rep. (Wis.) 236.

ABANDONMENT OF CONTRACT.—INSOLVENCY OF CONTRACTOR.—If the contractors are compelled, by reason of their own insolvency, to abandon their contract, they can not sue for the work and labor performed, unless they allege and prove that either the owner, as a dependent condition to the continuance of the work, failed to pay the estimates of the architects when properly made, or collusively induced such architects in bad faith not to make such estimates for the purpose of evading the payment thereof and defeating such precedent condition. *McConnell et al. vs. Hewes et al.*, 40 S. E. Rep. (W. Va.) 436.

ASSUMPTION OF RISK.—A bridge builder engaged in repairing a bridge assumed the risk of the danger necessarily incident to such work. *Daniels vs. Covington & C. El. R. & Transfer & Bridge Co.*, et al., 66 S. W. Rep. (Kll.) 187.

Current Notes

American

ELECTROPLATED DOORS.

A METHOD of producing a wooden door which is thoroughly enclosed in metal without visible seams, thus giving it the appearance of a solid door, has been developed by an inventor in Bridgeport, Conn., and is described in *Carpentry and Building*. This is accomplished by electroplating the wooden doors with copper, brass, or other metals, thus especially adapting them for use as entrance doors to flats or other large and expensive buildings where massive and elaborate effects are sought. The finished wooden doors are first filled with a wood filler, as a mixture of linseed oil and resinous gum, which is designed to waterproof and protect the wood thoroughly and prevent warping. The doors are placed in a tank filled with the heated filler, kept hot by steam. After the filler has thoroughly penetrated the wood they are lifted out and permitted to drain off, after which they are laid on a table for further applications. The door is then rubbed smooth and coated with a varnish, as shellac, and dried. The edges are trimmed with sheet metal strips corresponding to the width of the door, being attached to the four edges by means of nails, screws, or cement. The face of the strip on the edge of the door is covered with a metallic insulating varnish, after which the entire door is coated with a metal substance, such as thin metallic leaf, metallic brass powder, or common varnishing wash, with plumbago. When the coatings have become dry the door is rinsed and is ready to receive the electric deposit.

HOME SURROUNDINGS.

It is certainly one of the encouraging signs of our times, remarks the Boston Transcript, that in the last few years there has come an increasing love of outdoor life, and a growing desire on the part of the possessors of fine town houses to have country homes as well. Landscape gardening has become a more important profession, and now a school of manual training at Menominee, Wis., has taken up the matter of beautifying home grounds in earnest, and has prepared a useful handbook which gives simple directions for the laying out of artistic surroundings for homes and schools. To those who have been educated in some of the schools abroad, it is surprising to find that in this country the surroundings of the school are often below those of the home. In Germany many small gardens in school grounds are used by teachers to supply their tables, and occasionally as a means of education. In this country there are occasional public school grounds that are conveniently arranged and made attractive with lawns and shrubs primarily for ornament, while others, like the George Putnam School, in this city, are arranged primarily for instruction. The Stout Manual Training School of Menominee aims to exert a direct influence on the community as a whole, and, after beautifying its own grounds, steps were taken to aid every landholder in the town in the improvement of his home grounds, the individual lots being made part of a whole, with the idea of presenting to visitors a town that should be a model for others.

SHELVES AS ORNAMENTS.

"Few people realize how much character shelves add to a room," said a woman decorator recently in an interview reproduced in the New York Sun. "Like cushions and rugs and books, they give that delicious air of comfort that is so often lacking in the stately but stiff drawing-rooms of modern homes.

"When I make a contract for decorating or arranging an apartment artistically, I always ask for the privilege of putting in shelves if I deem them desirable. A great many people do not take to the idea at all. They associate shelves with the homely uses of the kitchen, the pantry and the cellar. The fact is, this very utility of the shelf constitutes much of its beauty.

"People have become educated to seeing bookshelves in a library or sitting-room in preference to set bookcases, for these have always seemed designed more as showcases for books and their bindings rather than to hold books ready for intimate use.

"There are fewer bookcases sold nowadays than formerly, for everybody seems to appreciate the charm of the low bookcases built in around a room or occupying some special nook or corner in a bay window or alcove. On the top of these shelves one can always have plants, photographs, magazines, all the hundred and one little furnishings that add to the beauty of a room.

"The high corner bookshelves are always good, for they use up space that is often wasted, and this is an important matter in these days of apartment houses."

New Books

A HISTORY OF ARCHITECTURE ON THE COMPARATIVE METHOD FOR THE STUDENT, CRAFTSMAN AND AMATEUR. By Professor Banister Fletcher, F.R.I.B.A., and Banister F. Fletcher, A.R.I.B.A., Architect. Fourth edition, revised and enlarged. With 256 Plates, comprising 1300 Illustrations. London, B. T. Batsford. 1901. Imported by Charles Scribner's Sons, New York. Pp. xlii., 531. Price, \$7.50.

A HISTORY of architecture that calls for four editions in five years is a book that must command attention. Mr. Fletcher's book—for although the name of his father, the late Professor Banister Fletcher, is retained on the title-page, the work is that of the younger man—has won well deserved support by presenting the chief facts of architectural history in a concrete and condensed form. The present edition, which is the fourth, has been so much remodeled and contains so much new material as to be practically a new work.

The plan of the book as explained in the preface, and which is both new and original, has been "not only to give in clear and brief form the characteristic features of the architecture of each people and country, but also to consider those influences which have contributed to the formation of each especial style." The method employed has been to reduce the chief architectural facts of each people and race to the briefest possible limit, and then, when variations occur, to note these in comparative tables, in which the essential descriptions and characteristics of each are fully noted. Thus, for example, we have long tables comparing the differences between French and English Gothic, a useful method both for the student and the man of affairs who may wish to know exactly what constitutes French Gothic, and in what way it differs from English or German, with which he may, perhaps, be more familiar.

It must be confessed that this method, admirable as it is in many ways, has some drawbacks. Every form of architecture is an evolution, merging off at the beginning and ending into features of the preceding or succeeding styles. The Gothic style lasted, let us say, for three hundred years, during which it underwent many modifications in each country in which it had any development. Mr. Fletcher's tables hardly give us the help in this direction the specialist may wish for, but the general arrangement of his facts is most excellent, capable of ready reference, clear and distinct.

And it is for just this purpose that a history of architecture is needed. There are not many people who will consult a history of architecture for the sheer joy of reading it, but there are many who want the facts divorced from theories and philosophy. It is to such that Mr. Fletcher's book will especially appeal. The general conditions attending the development of any style, the national, geographical, and religious influences, the part materials have taken in it, the external circumstances that one hardly realizes in looking at a building, and yet each of which has helped to produce the completed result—all these are set forth with sufficient minuteness and with no unnecessary padding. Then follow careful descriptions of the style, with the peculiarity of treatment of each feature carefully noted, and, finally, the comparative tables, which both give title to the book, and form, in many respects, its chief value.

Nor should the illustrations be forgotten. An architectural history without pictures is as intelligible as a drama without actors. Of all the problems centered in the preparation of an architectural history, those concerning the illustrations are the most difficult and the most important. Mr. Fletcher has solved the problem in a highly original and successful way. Numerous half-tone plates of uncommon beauty give the reader an ample knowledge of the actual appearance of a long succession of important buildings. In addition to these plates are many others in which a multitude of illustrations have been grouped,—details, sections, plans, maps. It is true the scale of these reproductions is sometimes small, but they are intended as hints and suggestions, and the student who really needs larger drawings can refer to the originals, all of which are carefully noted in the admirable list of illustrations. This feature of the book has added much to its cost, but it has also added enormously to its value. No other history of architecture contains anything like the wealth of illustration this book does, and, although the price in this country seems high, full value is received.

Manufacturers' catalogues are frequently books and pamphlets of the utmost value, and should be carefully preserved.

The Garden

THE WOMAN'S GARDEN.

THERE is, of course, no reason why a woman's garden should differ from a man's, and yet there is often a distinctively feminine trait in gardens tended by women and thriving under a woman's care that gives them an added beauty. The old-fashioned garden has been a fad of late, points out a recent contemporary in discussing this subject, the garden hedged with box, and gay with hollyhocks, gillyflowers, wallflowers, and the other homely flower favorites of olden time. There are beautiful old gardens around some of the old Colonial homes of New England and the South; and the mistress of a brand new Colonial mansion installs a brand new old-fashioned garden, but must accept with philosophy the fact that time alone can give the place its rightful flavor, can make the box what it should be, and can give the old-fashioned flowers an air of being at home.

The rose garden is fine, though rather more difficult to handle. Then there is the wild garden, particularly popular with English women, and to be found in rare beauty on many of the great English estates. Any one can have a wild garden, and a great deal of pleasure may be found in making one. The woman who does not know the secrets of her countryside is missing half the joy of country life.

The owner of a country house should make acquaintance with trees and plants and flowers and birds and shy four-footed wood creatures. When that is done she has all-year entertainment provided for her and country life has lost its bugbear of dullness and loneliness.

Set aside in the early spring a plot of ground that has a mixture of shade and sun and holds a few trees of a wild-wood kind, as well as a stretch of sward. A rockery should have a nook, too—not a monstrosity of artificial grottoes, but a careless, scattered pile of rocks packed in between with rich loam. If hydrants and water supply make a pool of running water possible, so much the better; but if not, the water and marsh plants must be barred.

Each week, all the season through, from the time of the first arbutus and wind flower, until the last aster has died, the woman bent on creating her wild garden may make new friends. All that will stand transplanting she may take home to her wild garden and there give them as nearly as possible the conditions in which she found them.

Many will die of homesickness, but a second or third trial may meet with success. A few seasons will be enough to produce a garden where one may see the season go by in a trail of color.

Wild gardening leads naturally enough to another form of gardening which just now is the latest fad. All through rural England and France, and in many corners of New England and the South, the herb garden flourishes as it has flourished for hundreds of years, and boundless faith is placed in the medicinal properties of herbs; but these gardens are usually adjuncts of cottages, and only recently has the great lady turned her attention to the herbs that were perhaps familiar to her great-great-grandmother.

One of the noblest ladies of England says that her herb garden is her greatest pride, and many other women have taken up the idea with enthusiasm. In one of the most magnificent homes of England a wild garden, overrun with tangled sweetness, leads by a terrace to a lavender garden given over wholly to sweet scented lavender that perfumes all the air and makes the reading bench under a spreading tree a nook in Araby the Blest. Beyond the lavender garden is the herb garden.

The enthusiastic herbalist can tell scores of anecdotes and traditions connected with that phase of the science.

Then there was the herb cure by signature. It was a forerunner of homeopathy, an illustration of like cures like, and its efficacy was vouched for by a multitude of believers.

Vervain, with its likeness to the human eye, was invaluable for eye wash. Certain spotted herbs were infallible in freckle lotions. Yellow herbs cured jaundice.

But it is the broad, general herb tradition that is most entertaining. What woman can afford to ignore cowslip water when it is warranted to produce beauty? Periwinkle tea will cure any husband whose affections wander, and a bed of periwinkle should grow under the windows of every happy home.

Rue will quicken the inventive faculty and should be fed to all writers of fiction. Sage will strengthen the memory and do a great amount of all-round beneficial work.

Sanitation

A REMARKABLE article in a recent issue of Insurance Engineering directs attention to the extraordinary dangers that are prevalent everywhere from the leakage of gas. Dr. James C. Bayles, the author of the article, treats the subject exhaustively, and marshals a great army of facts that conclusively demonstrate the extent and danger of this agent. The greatest danger from-leaking gas, he points out, is in crowded cities, whose streets are paved with an impervious material, and he cites a number of instances in which buildings in New York have become saturated with gas, resulting, in many cases, in sudden and disastrous fires where, ordinarily, swift destruction could not be looked for. One of these instances is the historic burning of the Windsor Hotel, which, although not a fireproof building, was destroyed in a fire of almost unexampled suddenness, extent, and intensity, which can only be accounted for by the building having been saturated with gas. That it was so, and that the circumstance was known to the proprietor, Dr. Bayles demonstrates by his own examination and warning some time before the catastrophe. The destruction of the dwelling of Mr. Wallace Andrews, in which Mr. Andrews was burned to a crisp in descending a short flight of steps, is another instance of the same sort. It was a well-built house of slow-burning construction that could not have burned so speedily from an ordinary fire. Many other examples are also noted. It seems to be an established fact that gas constantly leaks from the mains, that the leaking gas is odorless, and its presence therefore frequently unknown. The subject is one involving most important problems of fire and insurance, and well deserves much more attention than has hitherto been given it.

The relation between polluted water and typhoid fever seems to require no further demonstration, so frequently has the cause and effect been shown in this connection. It may, however, be interesting to note that a recent epidemic, in the summer of 1901, in Baraboo, Wis., has been shown to be directly due to polluted water. Investigation showed that one of the wells from which the water supply of the city was drawn contained a considerable quantity of iron, which caused the stoppage of the foot-valve. Pollution followed, and, on the machinery being cleaned, leaks stopped, and all put in order, the epidemic ceased.

In the face of remarkable engineering difficulties a plan has at last been devised for draining New Orleans, now dependent on a series of gutters and old-fashioned paddle-wheel pumps, which with every rainstorm leave the city a foot or two under water. No such elaborate system of sewers will exist anywhere in the United States when the plan is carried into effect. It involves an outlay of twelve and a half million dollars. New Orleans is built on a plain which is eighteen feet below the level of the Mississippi River at high water. The amount of drainage is greater than that of any other city. To deal with it lateral canals parallel with the Mississippi will have to be dug in the lowest part of the city. These canals and the main canal will be in reality tunnels under the city streets. The streets will be supported on steel arches and brick and steel concrete walls. A central power house with a capacity of 10,500 horse power will operate the system, pumping the drainage into the Bayou Bienvenue, an arm of the gulf below the city. Besides this central power house there will be three subsidiary stations, which will lift the water from one to another canal, and so to the end.

Problems of domestic sanitation are quite as important as the larger matters grouped under the head of municipal sanitation. The sanitation of the house from the domestic standpoint is a matter largely within the control of the individual owner and occupant. Not completely, of course, for, if the general sanitation of a place is bad, if the water is polluted, and if the city connections are of a poor grade, it will be impossible for the individual to remedy these fundamental evils and gross misfortunes. But so much can be done in making the house itself clean and sweet that it would seem unnecessary to refer to it, were it not for a general indifference that is so widely prevalent. It is not possible to teach every important subject in the public schools, and human beings often have the good luck to live happily in most unsanitary surroundings. But at least it should be brought home to every one that the house should be apparently clean. Whether it is so actually is another question. But appearances count for much, and if all our houses should seem clean in all their parts a great step forward will have been made in domestic sanitation.

Household Notes

A new material much used for fancy work just now is eminently suitable for bedspreads, says the Commercial Advertiser. A coarse kind of canvas in several art shades is woven in two colors, the groundwork being of, say, a dark green, while the design or flowers upon it are woven in a pale shade of light color, it being in fact much the same as an ordinary brocade. This canvas is about 68 inches wide and about \$2 a yard; so workers can, if they wish, buy exactly the amount required and work the design in cross-stitch or any other style of embroidery they please, or, if preferred, these bedspreads can be procured already prepared for working with a small portion commenced, always a great help to the uninitiated. Crochet lace to edge the quilts can also be had in different colors to match. The texture of the canvas being coarse is an additional advantage, as the embroidery is quickly done with bold and effective results. This material is used for portières, embroidered with heavy silk in bold designs.

Mr. Will Bradley has been disporting himself in designing a house to which the modest title of "A Bradley House" has been given. No more distinctive designs for a dwelling and its furnishings have been made for some time. Curves and scrolls and twists and the other material of hackneyed designers are not to have place in this remarkable dwelling. It is a house of verticality, pure, simple, and direct, with square corners and sharpened edges. His suggestion for a piano is a novel one. An upright instrument is enclosed within a great rectangular chest, decorated with richly ornamented hinges and interior panels. It does not, of course, suggest a piano when closed, but it is an interesting idea, capable of highly ornamental treatment.

Some new wall paper has every length in hanging capped. A tangle of tall green rushes forms the motif of the paper for perhaps seven or eight feet up, according to height of wall, and is capped each width of paper with life-size purple fleurs-de-lis. A trailing greenery of rose vine foliage runs up the wall and ends in branches of American Beauties. The silver green pointed foliage of chrysanthemums, with an occasional bud and blossom, blows out into the great nodding gorgeous flowers at the top of the wall. It is a pleasant change, giving a natural look to the design, instead of chopping it off with a molding and a border. Another paper shows a trellis covered with Wistaria, full of luxuriant purple bloom. Dainty bedroom designs, bunches of red top clover in exquisite natural coloring on a grayish-green ground, scattered marguerites on a pale green ground, lovely in design and coloring, form another charming paper.

Much beautiful work for interior decoration has been made by the Deerfield Society of Blue and White Needlework, of Deerfield, Mass. The designs are generally of Colonial origin, and, as the name of the society indicates, are in blue and white. The society has been in existence for five years, during which time many fine pieces of work have been turned out. It is intended that each article shall have an artistic value of its own that will give credit to the woman producing it.

EFFECTIVE WINDOW DECORATIONS.—Nearly filling one end of the room was a deep recessed window and window seat, the former with large plate-glass sashes that made the room seem part of a fruit orchard beyond, which was just bursting into pink and white bloom, and the latter piled up with silken cushions to match a great semicircle of hyacinths and tulips just outside that blazed with color within their setting of emerald green turf. Their soft tints of pink, yellow, blue, white, purple, lilac, and dark red were reproduced in the piled-up cushions of the window seat. "It is a fancy of mine," said the creator of this decorative window, "to have the cushions of that particular window seat to match the flowers in the bed beyond. I have them made like pillow slips, buttoned on, and change them several times during the season. In June, after the tulips are gone, I have June roses, and after the June roses the gay annuals, ending up with chrysanthemums, which last until frost, and with each change I have cushions of the same color."

April is the month of the buffalo moth grub which works so much harm to carpets and woollens. Benzine poured on to the edges of carpets where these pests have appeared is the best remedy. Closets and places containing woollen clothing should be washed out with benzine and the contents well aired.

Current Notes

English

MODERN BUILDING RESTRICTIONS.

THE conditions of building in large, overcrowded cities have considerably restricted freedom of design. There are several such limitations, points out the Building News in discussing this subject, the party-wall restriction, compelling the architect to limit his area between walls more or less close together, necessitating greater height; there is the ancient light restriction, which necessitates ingenious contrivances for obtaining light by means of light areas, and setting back buildings. There are other restrictions caused by the operation of the Building Act that seriously limit the architect's resources in the use of certain materials like timber, and other artistic means; also the necessities of providing basement areas, transit by lifts, and staircases. All these things exercise considerable control over the design, as we may see in any of the larger warehouse and office buildings in the city of London. It may be the architectural effort is confined to one elevation facing the street, while it is crowded with windows of varying design to afford the required light. Behind there is nothing but blank dismal walls pierced by windows of the commonest kind, perhaps cavernous light areas. There is nothing architectural about these back lands of modern London.

THE UGLINESS OF TOWNS.

Look at any of our new towns, writes Mr. G. F. Bodley, R.A., where there is not the presence of old buildings to redeem the general aspect of ugliness and vulgarity. It is not that the houses are merely destitute of ornament: there is the presence of vulgar and ugly so-called ornament in plenty—sometimes, indeed, in heavy and tiresome profusion. The shape and proportion of the houses seem to have come by chance and without design. The ugliest materials have been used—bricks of the poorest color and of ungainly size, the roofs covered with cold-looking blue slates of too large dimensions, and the details of the exterior are in every respect without interest or refinement. Inside we see the same poverty or vulgarity. The meanness of stained deal seems to have been delighted in, or, if it could be afforded, that ugliest of all woods, pitch pine, with its coarse grain and hot color.

THE LONDON BACKYARD.

BURNS's cry that we might see ourselves as others see us is not always consonant with a truer or less biased opinion. Some time ago we were rather amused to read in a well-known American architectural contemporary, remarks the Builders' Journal, that Londoners have one custom which our friends desire to see introduced into New York. Those who reside in or are familiar with London will doubtless learn with surprise that the backyards of the houses in the Metropolis are rendered attractive, decorated with flowers, and made to serve a purpose quite impossible to any New York backyard. There is usually a balcony overlooking the yard, which is ornamented with growing plants until it might be taken for a conservatory. The imagination of decorators is allowed to exercise itself in all sorts of ways in making beautiful this part of a London house. It may be fairly assumed that the writer who gives this glowing account of the London backyard has never seen one: for the place is more often than not a depressing smoke-begrimed area, which is not infrequently prejudicial to health, an opinion which is confirmed by Dr. Sykes in his recently published book on "Public Health and Housing." Of the flower-bedecked balcony which might be mistaken for a conservatory we know nothing, and as regards the decorators' imaginations we should prefer to remain silent, though we can not refrain from expressing pleasure in learning that they possess imagination.

EXTERIOR USE OF TILES.

THE question of using tiles externally, pointed out Mr. Halsey Ricardo in a recent lecture, is made very difficult by the doubtful behavior of the tiles themselves. It is a common sight to mark great patches on the walls, where tiles have been and have dropped off—to find them cracked and discolored. The Underground Railway here is painfully rich in examples of their failure, and I note that the linings in the Two-penny Tube are beginning to discolor. Wet, followed by frost, with an imperfect key for fastening at the back, accounts for the downfall in most cases, while the impure atmosphere of London endeavors to discolor everything that it can not corrode.

New Building Patents

THE following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY by MUNN & Co., Solicitors of American and Foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

TILE WALL. J. L. Record, Minneapolis, Minn. February 4 692,544
MANUFACTURE OF ARTIFICIAL STONES, TILES, ETC. E. Root, Dassel, Germany. February 25..... 693,906

CARPENTRY.

METALLIC STAIR TREAD. T. M. Mahony, Troy, N. Y. February 11 693,143
WEATHER STRIP. D. H. Burkey, Allegheny, Pa. February 11 693,230
DOOR. C. H. Pope, Brockton, Mass. February 18..... 693,440
EAVES TROUGH HANGER. C. E. Brown, Point Pleasant, N. J. February 18 693,492
WEATHER STRIP AND GUIDE FOR WINDOWS. H. E. Kenny, Detroit, Mich. February 25 694,062
WEATHER STRIP. F. M. Cannon, McKeesport, Pa. February 25 694,135

CONSTRUCTION.

CHIMNEY. Kenison, Buck & Perkins, Lynn, Mass. February 4 692,304
CONCRETE FLOOR. P. V. Parsy, Pernes-en-Artois, France. February 4 692,541
ILLUMINATING STRUCTURE. F. L. O. Wadsworth, Williams Bay, Wis. February 11..... 693,088
PILING. A. B. Clark, New York, N. Y. February 11... 693,236
BUILDING CONSTRUCTION. C. M. Carnahan, Allegheny, Pa. February 18 693,494
ADJUSTABLE CHIMNEY TOP. C. E. Burress, Wichita, Kans. February 18 693,539
CHIMNEY. G. Steinel, New York, N. Y. February 18... 693,755
CONSTRUCTION OF CEILINGS AND WALLS. A. Rincklake, Munster, Germany. February 25 693,905
COMPOUND LUMBER OR STRUCTURE. G. L. Smith, Newport News, Va. February 25 693,915
CHIMNEY CAP. A. T. Cox, Scranton, Iowa. February 25 693,951
SYSTEM OF CONSTRUCTION WITH BRICK STRENGTHENED BY METAL. H. Henkel, Brussels, Belgium. February 25 693,966
CONSTRUCTION FOR BUILDINGS HAVING CIRCULAR OR REGULAR SHAPED ROOFS CONVERGING IN ONE POINT. M. H. Vall, Chicago, Ill. February 25... 693,989
PLASTER BOARD. J. Schratwieser, Brooklyn, N. Y. February 25 694,111
SCAFFOLD BRACKET. W. E. Arnold, Dallas, Texas. February 25 694,230
STAVE COLUMN. J. S. Miller, Ft. Wayne, Ind. February 25 694,320

ELEVATORS.

ELEVATOR. F. E. Herdman, Winnetka, Ill. February 4 692,286
SAFETY ATTACHMENT FOR ELEVATORS. G. F. Joyce, Brookline, Mass. February 11 693,027
ELECTRIC ELEVATORS. N. Lindstrom, New York, N. Y. February 11 693,038
ELEVATOR CLOSING DEVICE. W. A. Robinson, Independence, Iowa. February 18 693,444

FIREPROOFING, FIRE-EXTINGUISHMENT.

FIREPROOF FLOOR. G. Knoche, New York, N. Y. February 4 692,309
FIRE ESCAPE. A. H. Andrews, Elmira, N. Y. February 11 693,095
ALARM FOR FIRE EXTINGUISHING SYSTEMS. F. Gray, Chicago, Ill. February 11 693,322
FIREPROOF CONSTRUCTION. W. Orr, Trenton, N. J. February 18 693,429

HARDWARE.

KNOB ATTACHMENT. C. Glover, New Britain, Conn. February 4 692,265
SASH HOLDER. R. B. Maloom, New York, N. Y. February 4 692,532
KNOB ATTACHMENT. W. Schamweber, Seattle, Wash. February 4 692,550
DOOR CHECK. J. Horsfield, Chicago, Ill. February 11... 693,021
DOOR SPRING. W. Hargrove, Montreal, Canada. February 18 693,389
HINGE. C. M. Johnson, Milwaukee, Wis. February 18... 693,546
LOCK. F. A. Hickson, Atlanta, Ga. February 18..... 693,602
SASH FASTENER. W. W. Battles, San Jose, Cal. February 25 694,234

HEATING AND VENTILATION.

SHEET METAL RADIATOR. J. D. Karnaghan, Marshalltown, Iowa. February 4 692,300
HOT-AIR FURNACE. L. Patric, Springfield, Ohio. February 4 692,336
SHEET METAL RADIATOR. C. E. Safford, Buffalo, N. Y. February 4 692,365
VENTILATOR. H. W. Waldmire, Philadelphia, Pa. February 11 693,193
FIREPLACE HEATER. T. B. Jackson, Belmont, Ohio. February 25 694,155

PLUMBING.

FAUCET. A. Huck, Milwaukee, Wis. February 25.... 693,865

TOOLS.

SCREW DRIVER. W. W. Fairchild, Tracy, Conn. February 11 693,123

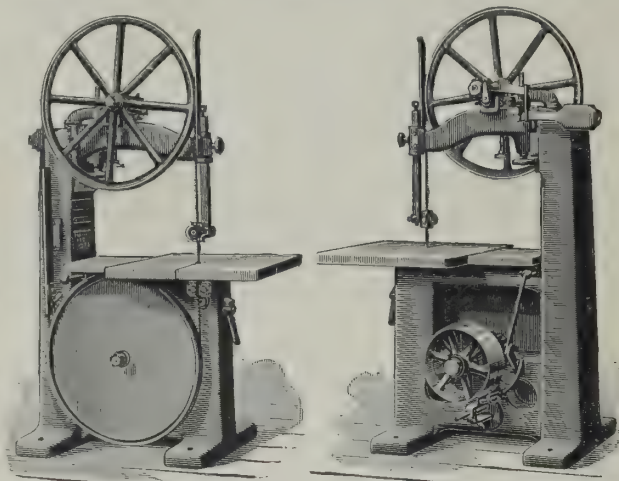
MISCELLANEOUS.

ELASTIC FLOOR COVERING. J. Coomber, New York, N. Y. February 4 692,242
NON-SLIPPING WEARING TREAD OR COVERING. C. H. Wilkinson, Huddersfield, England. February 4... 692,397

Publishers' Department

NEW SCROLL SAW.

THE result of years of experience in building band saws is embodied in the make-up of the machine shown in the two illustrations. New features suggested by constant experimenting, combined with new inventions in this saw, will be readily appreciated by all users of the scroll saw. It will do the work of



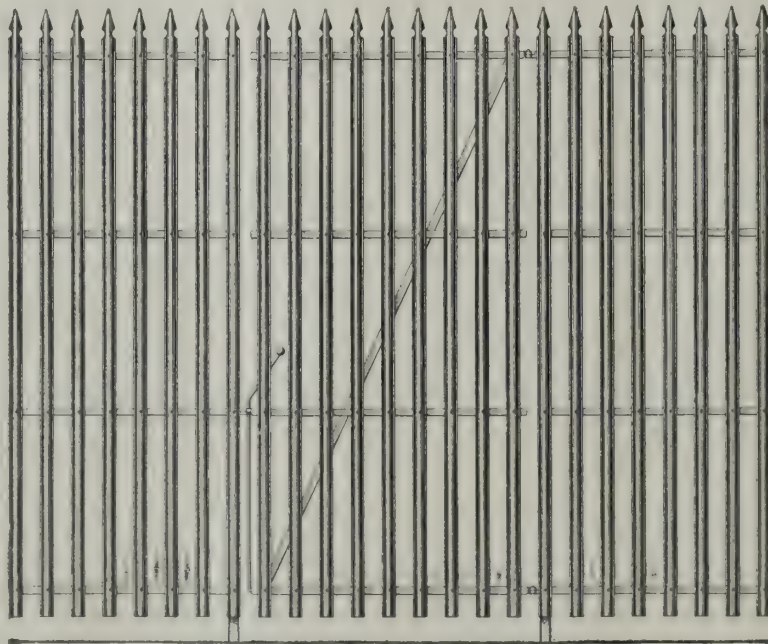
No. 50 BAND SCROLL SAW, FRONT VIEW. No. 50 BAND SCROLL SAW, BACK VIEW.

at least two of the ordinary machines, running more smoothly at a higher speed, and breaking fewer blades.

The No. 50 Band Scroll Saw has an upright column, which is very stiff, and prevents vibration when the machine is running at a very high rate of speed. The iron table, which can be tilted to any angle, is 18 inches from the guide, and will take 31 inches between the blade and the column. The patent straining device is very sensitive, and the top wheel hangs on a knife edge, maintaining at all times a uniform tension on the saw blade. The lower wheel is webbed, thus preventing the circulation of dust, and being heavier than the upper one, controls its movements. The upper wheel can be easily raised and lowered without stopping the machine. All the different adjustments may be made quickly, accurately, and with facility, so that time and labor are saved, and superior work is performed. J. A. Fay & Egan Co., of Nos. 209 to 229 West Front Street, Cincinnati, Ohio, the makers of these band saws, will furnish illustrations and particulars, and also send, free of charge, their new combined 450 page catalogue, showing all the machines they make.

PRESSED STEEL FENCES.

THE immense contract for furnishing about ten thousand feet of pressed steel fence to enclose the park side of the World's Fair grounds in St. Louis has been awarded to the iron and steel manufacturing firm of Mesker & Brothers, of the same city. The



WORLD'S FAIR FENCE.

work is already well advanced, and the great capacity of the plant will insure its early completion. The design of the fence shown in the illustration was especially prepared for the fair grounds, and selected from many others in competition as being the cheapest, most durable, and neatest design presented. The

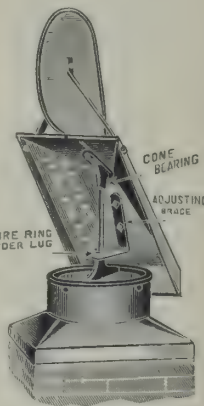
fence is made entirely of steel, pressed into form, and consists of end, line, and gate posts, rails, pickets, and gates. It is the first of its kind manufactured and placed upon the market in the United States, and since its adoption by the World's Fair, arrangements have been made to produce it in various heights, suitable for residences, public parks and buildings, and cemeteries, at so low a cost as to bring it within the means of any one desiring an ornamental fence around his property. This firm makes a full list of metal furnishings for buildings, from a window frame up to a complete steel front. All architectural sheet metal and structural wrought iron work, cresting, fencing, area grating, fire-escapes, brackets and balcony railing, window and door caps, skylights, galvanized iron cornices, gutters, spouts, ridging, finials and columns, sills and lintels for brick buildings are a part of its large output. The works are at 421 to 519 South Sixth Street, St. Louis, Mo.

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POWERS' AUTOMATIC CHIMNEY TOP.

The cut shows the top complete for the smoke stack. The brace at the bottom fits over the stake and holds the device in place. The vane holds the cover against the wind, thereby causing a vacuum sufficient to produce the proper draft.

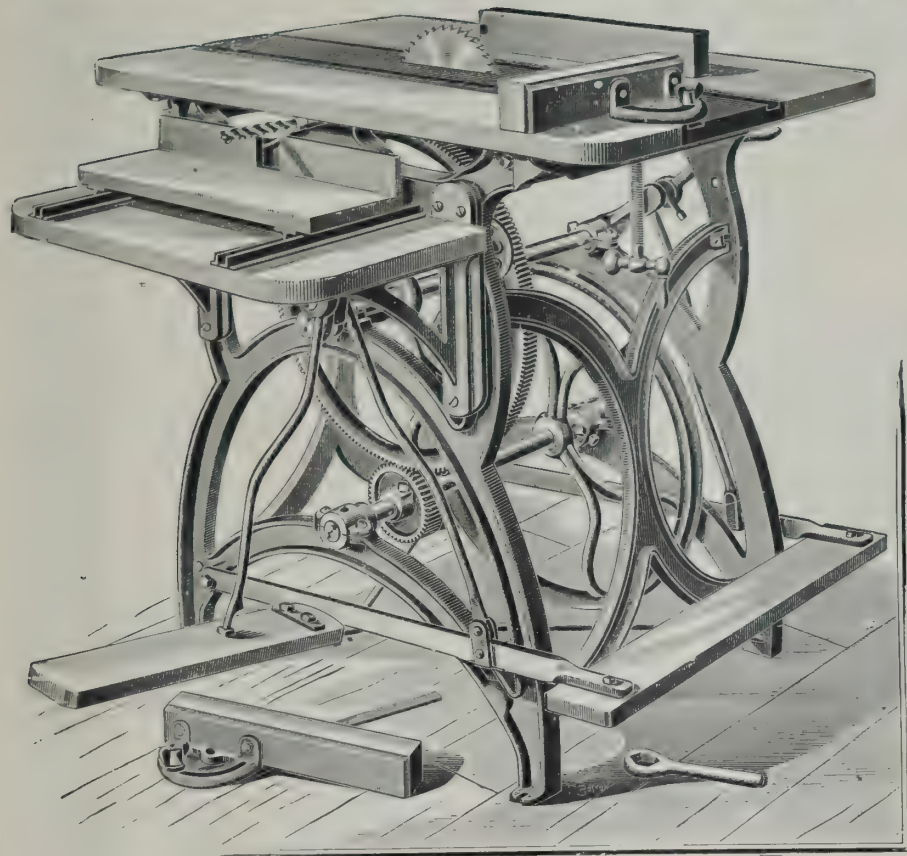
IRON RESERVOIR-VASES.

WALBRIDGE & Co., of Buffalo, N. Y., make a fine variety of iron reservoir-vases. These artistic and useful vessels are made in many styles and sizes, and their distinguishing feature lies in the fact that the reservoir does not need refilling oftener than once in ten or fifteen days, according to the size of the vase. The earth receiver is at the top. Under this is the reservoir for water, which is filled through openings in the bottom of the receiver. A tube packed with moss or sponge, through which the moisture is drawn up into the earth by capillary attraction, connects the receiver with the reservoir, and prevents the ground becoming hard and caked, as in ordinary vases, and there is no excess of moisture in the open and porous condition of the soil, the plants thriving to perfection throughout the entire season. The firm manufacture lawn chairs, rustic settees and stylish settees, one pattern of the latter being made with a seat of hardwood slats, oiled and shellacked; also folding chairs and settees with wrought iron frames and backs and seats of oiled hardwood.

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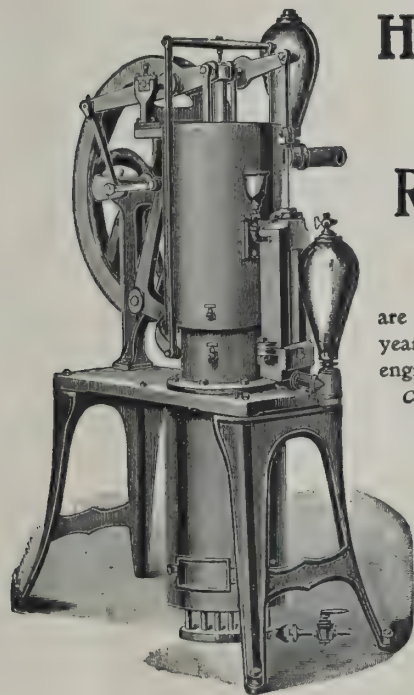
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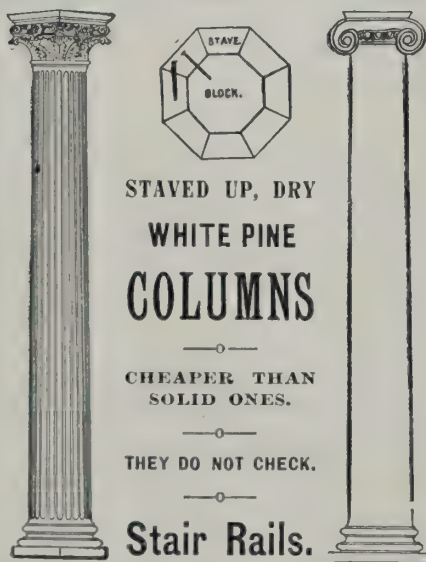
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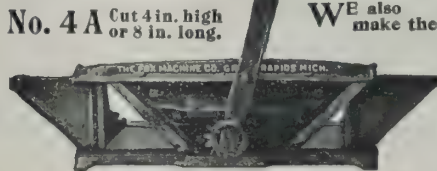
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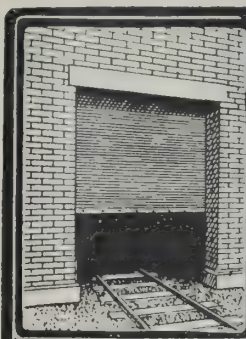
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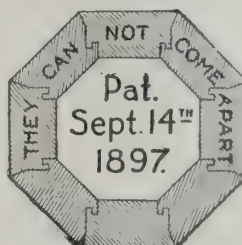


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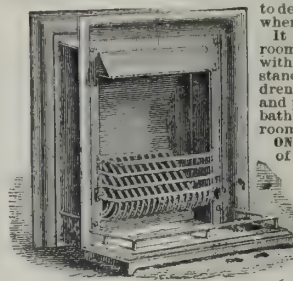
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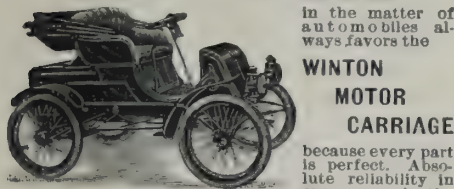
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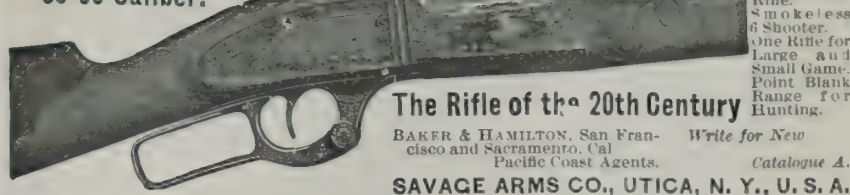
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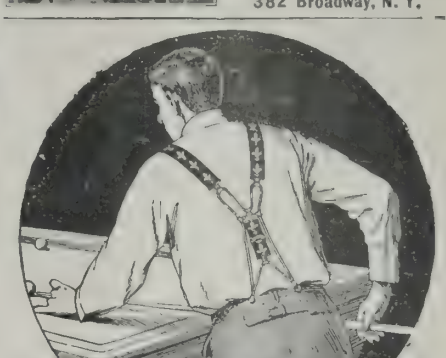
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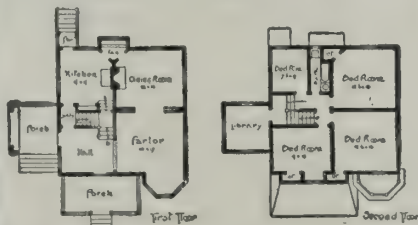
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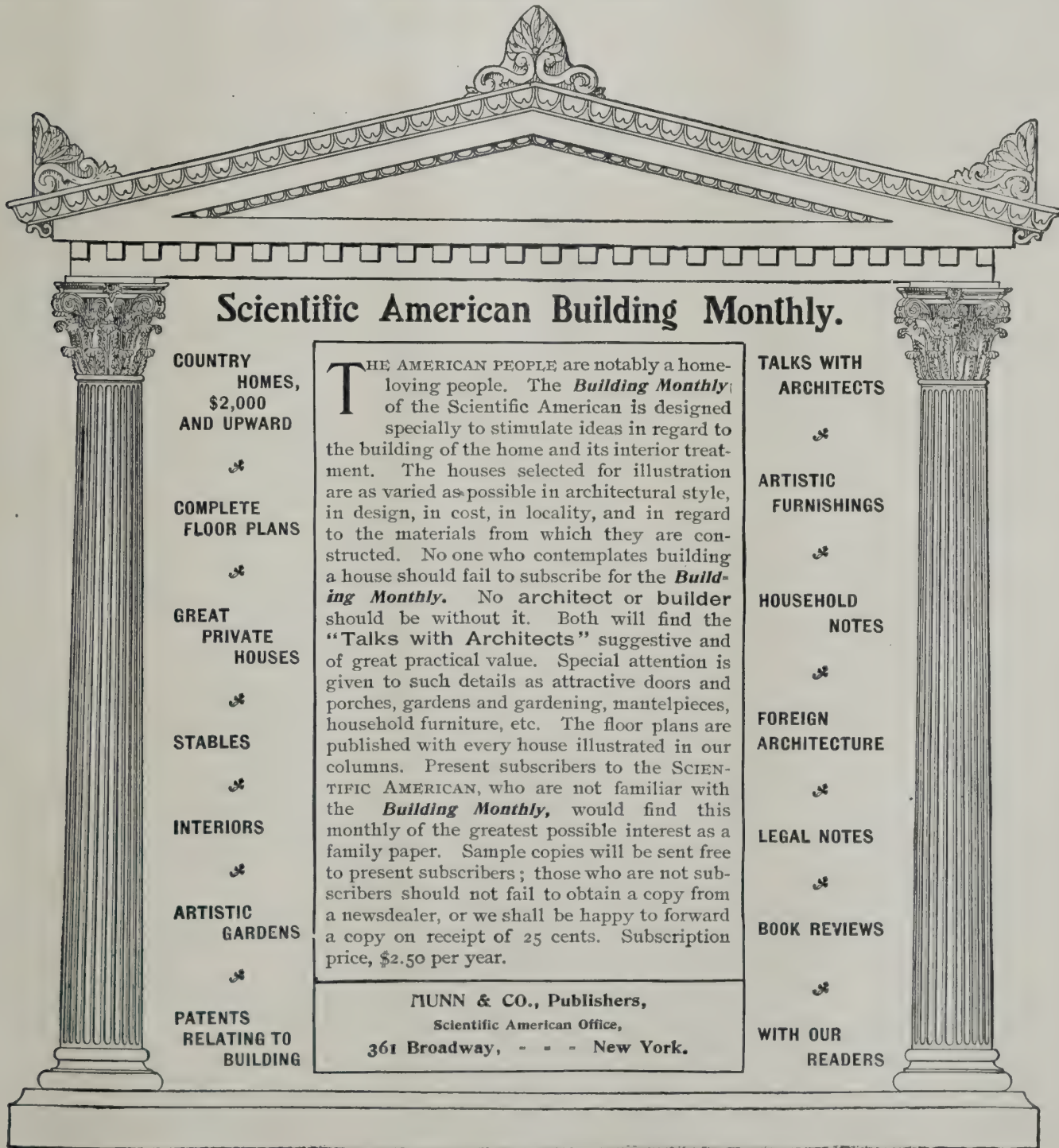
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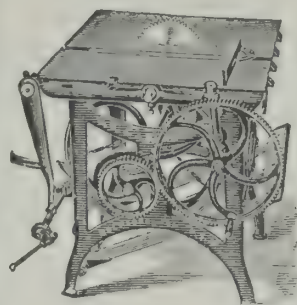
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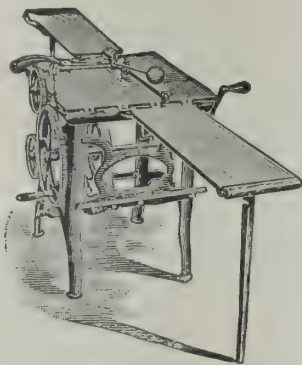
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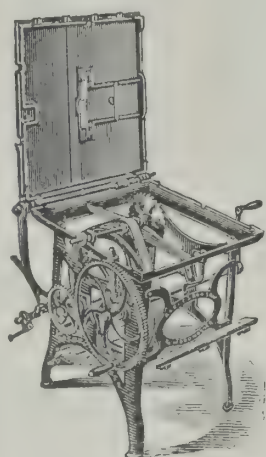
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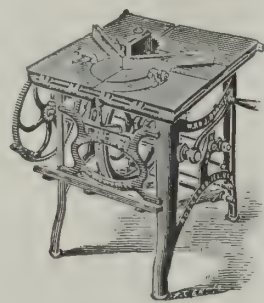
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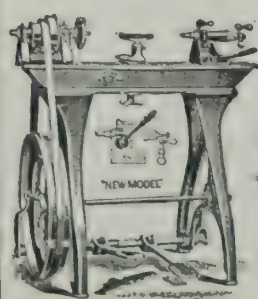
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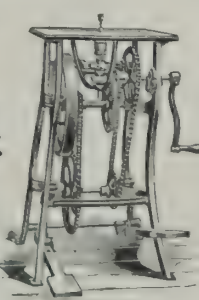
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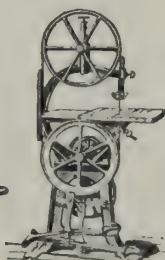
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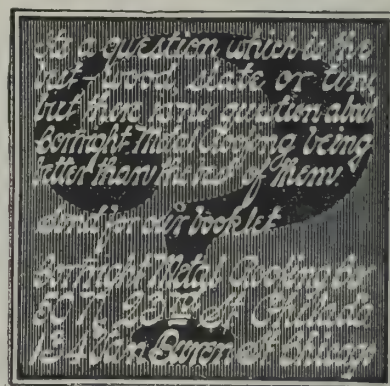
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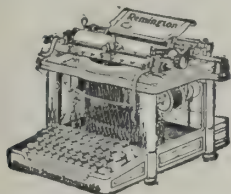


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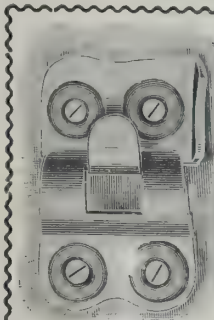
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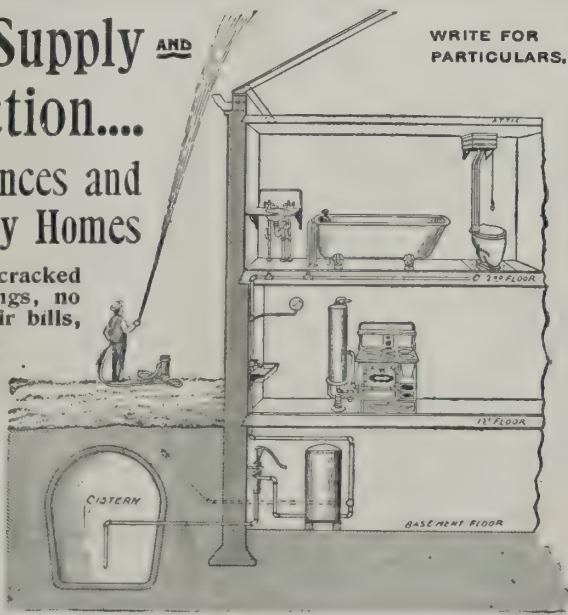
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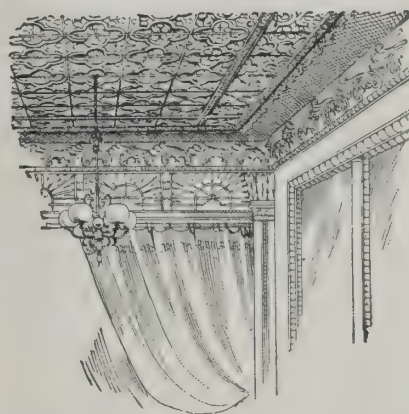
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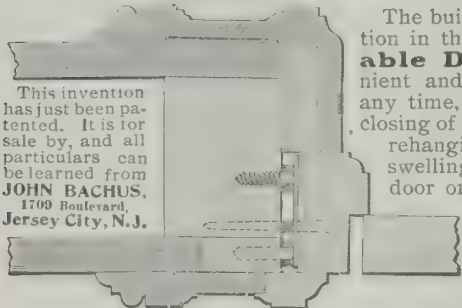
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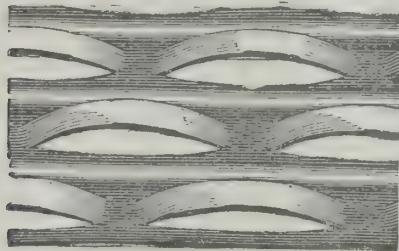
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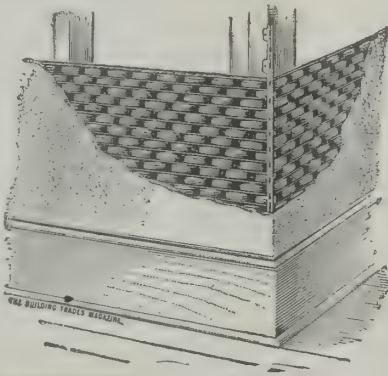
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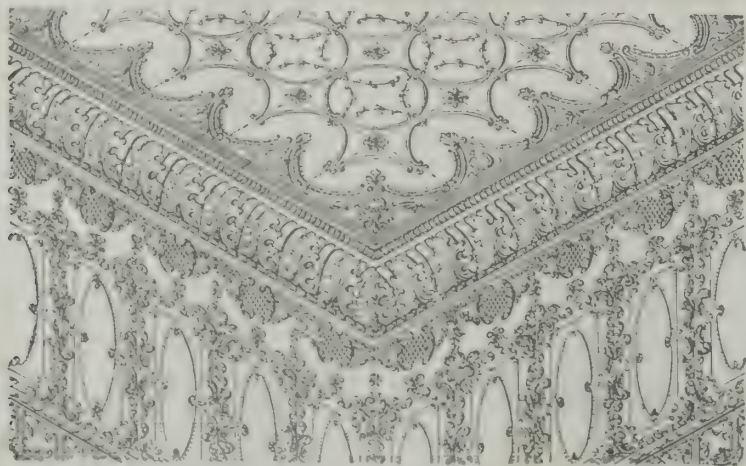
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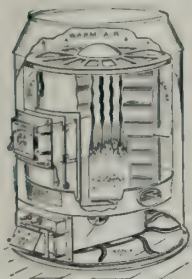
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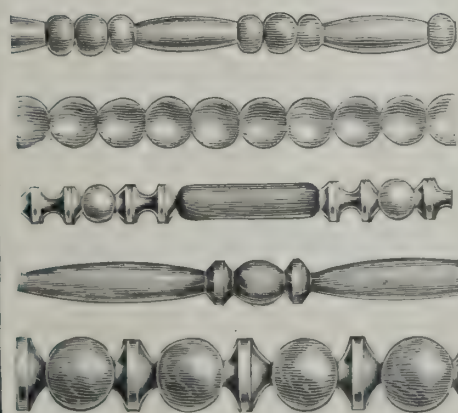
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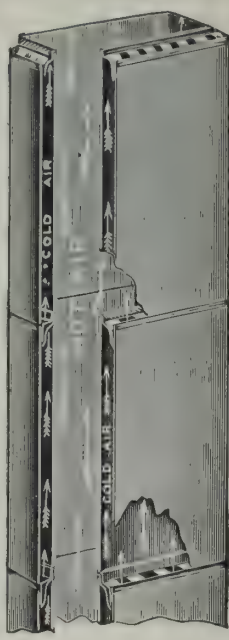
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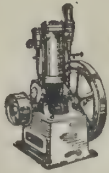
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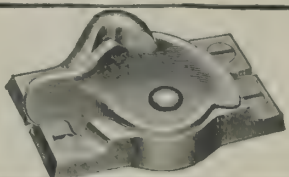
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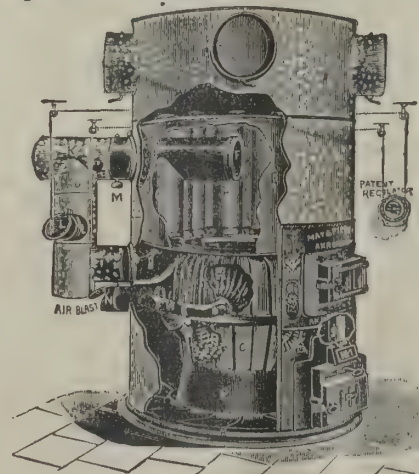
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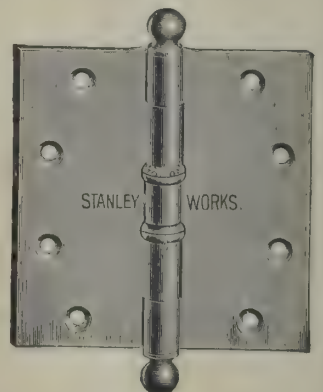
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MARBLE CHIMNEYPiece IN THE RATHAUS IN LÜBECK.

From Blätter für Architektur und Kunsthandwerk.

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MONTHLY COMMENT.

MAY! Another season has opened and spring has once more seized upon the land. The suburbanite is once more happy, for his season has arrived. It would be strange indeed if the sojourner in the country was not prepared to enjoy the coming season with new zest. The winter has been an uncommonly severe one, the heavy weather of its ending quite overbalancing the balm of its beginning. And the inhabitants of our cities may naturally look forward to better times. The winter has been almost unprecedented in the number and nature of the calamities that have visited our cities, both large and small. Fires, explosions, catastrophes of many kinds, and much disease, have visited the cities and left costly marks of injury to property and loss of life. It has been a bad winter, and as life is supposed to hold some consolations, and generally does so, we may hope for better things in the summer months to come. A glad welcome, then, to May, and a happy, prosperous summer to every one!

What is an up-to-date house? The phrase is a badly used one, and is applied to almost everything, animate and inanimate. In the popular vocabulary up-to-date appears to mean for anything strange and odd, uncommon and new. And new, in its turn, does not stand necessarily for something just created, but something bizarre and quite unlike anything ever seen before. These, of course, are forced meanings, without reason and without point. There is no reason at all why an up-to-date house should be queer in design and unusual in execution. Properly speaking an up-to-date house is one designed by a skilled architect, thoroughly acquainted with the resources of his profession, alive to all the merits of the most recent ap-

pliances for health, comfort, and convenience, possessed of a fine appreciation of beauty and fitness in design, and clever in the artistic combination of every property, every material, every device needed to make a dwelling house a work of art to look at and a work of science to live in.

In many respects the most important movement in current foreign art, whether architecture or decoration, is that called by the French the Art Nouveau. This movement has, as yet, hardly developed in America to the same extent it has in England, France, and Germany, though its influence on our designers is becoming more and more marked every day. Its most advanced form is seen in Germany, where its forms are so strange and unusual as often to seem mere eccentricities. A writer in *The Artist* points out that the most characteristic feature of this new decoration—for as yet it is chiefly used in furniture and decorative work—may be called the "toasting-fork" motif, a particularly happy description of the short curves and long lines which are characteristic of this work. The author of the article is disposed to view the matter facetiously, and points out several well marked forms, as the "toasting fork flower," the "hinge toasting fork," the "Noah's Ark tree toasting fork," and the "candelabrum toasting fork." Usually, he remarks, it has flowers or buds "growing on the prongs, with a leaf or two on the stem." Other details are perforated hearts and panels with inscriptions; the latter, however, are not carved, but ornamented with hammered copperwork or gesso. The furniture is plain or green-stained oak with copper fittings, or, the most effective and latest use of metals, rusty steel. The column is often introduced, being made taller and taller, with a candle-socket on the top, or a rusty steel lamp with thick, green, streaky glass. The influence of the style on the exterior architecture is very marked. Long, high, sloping buttresses are placed "at such odd corners and angles as are best calculated pleasantly to surprise the spectator"; the windows are long and narrow and are so arranged "that you can not see out with comfort either standing or sitting"; the chimneys are about twice as large "as would beseech any ordinary house to entertain, and on the front and back should be fixed large wrought iron S's"; while the roof should be large enough for the upper story to disappear into it and be lighted by quaint dormer windows. The house is painted white with the exception of the roof, which is tiled, and the shutters, which are painted a grass-green color and perforated with hearts in the center.

Art Nouveau, however, is not a subject for jocularity alone. That it has received eccentric development, that it has been pushed to extremes, that it is sometimes not beautiful and is frequently odd and strained, does not diminish the fact that, in its origin, it began as a serious protest against established rules and academic formulæ. In the right hands, and properly developed, it is capable of most useful, charming, and delightful treatment. It is a form of design dangerous to the commonplace man or the worker without natural talent of extraordinary merit. For such it is a pitfall, opening up all sorts of dangers and inviting sheer eccentricity. Eccentricity is closely akin to ugliness, while the aim of art is to beautify and be beautiful.

Fitness is one of the most essential qualities of the design of good furniture, as, indeed, it is in the design of anything put to practical use. One does not put a brocade chair in the kitchen nor a wash-bench in the front hall. So far as general arrangement goes there is not much room for doubt; the furniture belonging to one room generally finds its place there without much hesitancy on the part of the owner. But the question of fitness takes on a new aspect when the possession of some special piece of furniture is desired or ownership acquired. As has been more than once pointed out in these pages, a single piece of furniture, if especially large or splendid, or if particularly ornate or elaborate, is more apt to spoil a room by its conspicuousness than help it by any intrinsic beauty it may possess. Handsome furniture for handsome rooms is a good rule, and while possibly beginnings may be made with a single article, it is better not to make even the beginning unless some general scheme or ulterior end can be foreseen at the commencement. One's beds and tables, stools and candlesticks, should conform to one's general state and means. Good, useful furniture is to be preferred any day to costly, elaborate articles that one keeps only to look at and which one is fearful of using lest they be hurt. Mistakes in furniture are easily made. The articles can be readily moved and rearranged, and sometimes quite handsome pieces can be had at small cost. Inexpensiveness in house furnishings is often desirable, but bargains in furniture are not always to be measured in cost value, nor are they always what they seem.

THE ART OF HOME BUILDING.

THE art of building a home is one of the noblest and most important of the arts. It is the one form of art that directly affects every one, for even the poorest has an attempt at a home, and the mortals who are absolutely devoid of a spot or a nook they can call their own are happily not numerous. But although every one has, or seeks to have, a home of some sort, very few understand what is meant by the phrase, "building a home." For it strangely happens that the art most practised, the art which touches most people, the art which should be the most popular and the most cultivated, is a strange and little understood art, of which much is said, in which much is done, and of which little is known or appreciated.

Home building differs from house building, in that while every dwelling may be a house, not every dwelling is a home. A home implies occupation; it means furnishings, decorations, objects of use and of beauty. The home is the utilization of the dwelling; it is the transformation of the house from a thing of stone and wood to an object of living utility.

Houses are built; homes are made. The distinction is a vital one, and it is not the less real because the object of all house building is the creation of a home. The house is the foundation of the home, the first step, the important basic stage which is going to make or mar the home once the final steps of home-making are taken. In designing, planning, and building the house, therefore, its home-value is a matter of the first consideration. If it fails in that it had better never be built at all.

Now the process of house building is generally independent of this very vital consideration. The architect is apt to consider his house only from his personal point of view as a designer. To him a house is a problem in design, a problem which he will consider as an actual construction, which he will conceive as actually erected, and study in every aspect, but which, after all, is a problem in design that must look well on paper or which must be made to look as well as its designer can bring it to do.

It is extremely important that a house should "look well," but it is much more important that it be good in itself. And this means more than mere appearance, more than simple utility, but that fortunate combination of all qualities in building which will lend themselves to the creation of a successful home—qualities restful, convenient, beautiful, and desirable.

In building a home, therefore, it is necessary to look beyond questions of design, to pass beyond composition, the relation of parts, the arrangement of details, the grouping, massing, development—the many elements partly technical, partly derived from common sense, that go toward home-making. All these things count in the end, all are useful and even necessary, but they are means to an end higher than good design, and touch on the wholesomeness of human life.

Here, then, is a measure to success in home building: How far can it help the occupants of the house? How far can it make them better, make their lives more cheerful, their influence more widely spread? These are not abstract moral questions, but practical everyday problems with the house as foundation. The grandest dwelling in the world was built for more than the mere piling together of architectural parts or as a fabric for adornment. Beyond these matters of detail—for they are only that and nothing more—is the real function of the dwelling as a place for human residence, as a site for human activity.

Architecture is the most human of the arts, and house building is the most human phase of architecture. The church, the theater, the office building, the many structures that modern life has evolved and differentiated, have all their human side and their human value. But the house surpasses them all in its human interest, because it affects more people and it affects them all the time.

The art of building a home, therefore, rests on the degree with which its human aspects are developed and considered. Beauty and convenience, size, the number of rooms, the amplitude of its conveniences, the merit of its design, the splendor of its parts, the refinement of its style, all count as nothing compared with its livable qualities or its human aspects. And this human quality is not dependent on any one of the technical resources of the architect, but is the result of their wise and artistic utilization with the human end kept well in view.

The fundamental proposition is very plain and simple. A house is a building intended to be lived in; living implies human life; it is to surround human life with the sheltering care of architectural resources that houses are built. There are many things which help in the art of home making and home building, but the house itself, as a building and as a work of architecture, is the basis on which the noble superstructure of the home is erected. And all the art in the world can not transform a house that ignores its human functions into a comfortable or agreeable home.

TALKS WITH ARCHITECTS

No. 16. MR. J. MONROE HEWLETT ON THE ARCHITECT AND THE MUNICIPALITY.

It is at least obvious that much of our public architecture is unimportant and unworthy of standing for any degree of civic condition, and it is not to be wondered, therefore, that our architects have given more or less attention to the subject, and have come to realize the imperative need of radical changes. For several years attempts have been made from time to time to remedy the present conditions that have brought public architecture to this state by means of legislation. An effort was made in New York to secure the licensing of architects, much in the same way as plumbers and steam engineers are licensed, a movement that found success in some other States, but which has not yet been successful in New York. More recently an effort was made to graft an extraordinary law on the statute books of New York, by which a so-called "eligible list" of architects worthy to do city work was proposed; an effort that was fortunately nipped in the bud through the common sense of some of the professional societies asked to support it. This singular project failed, but the mere fact that it was brought forward showed that architects were realizing that something must be done, although they did not know how to do it. The subject is very far from being a professional one, for a public building is a public building, it belongs to the city, it represents it, and should be

"It is, however, I think apparent to all that some method must be found of securing competent architectural services for the design and erection of municipal and other public work. No uniform system is in vogue at present; in fact, there are four different methods by which architectural appointments may be made. These are, 1st. Direct appointment due to personal influence; 2d. Direct appointment due to high professional standing and acknowledged ability in some special line of work; 3d. Appointment by means of limited competition; 4th. Appointment by means of open competition. If we eliminate the first of these, we have left three methods, each one of which may prove proper and wise under certain conditions, and the choice among these three methods of selection can not with safety be delegated to any one except the official who under the city government is responsible for the conduct of the undertaking.

"Two general situations must be considered in this connection: (1) That in which the city administration is assumed to be friendly to the best sort of architectural practice, and (2) that in which the city administration is not influenced by any such high ideals. One or the other of these conditions must invariably exist, and the immediate question then is, if we grant for a moment that the kind of administration represented in the first class can be relied upon to work for the best in these matters, and should not therefore be hampered by definite rules, how far is it wise to establish by legislation a method of appointment of architects for city

President of the Borough of Brooklyn, who has authorized the Superintendent of Public Buildings and Offices (a salaried city official) to prepare plans for a new court house in that borough.

"The first instance will unquestionably receive full indorsement as a method from the best part of the architectural profession; the second case, which demanded a certain personality, seems, in this exceptional instance, equally desirable; but the third case is open to justifiable criticism. It seems to presuppose either that the city official in question did not have sufficient duties or that the task of preparing designs and plans was an extremely simple and easy one. If one may make a comparison, it might pertinently be asked if the Mayor of New York were a bridge engineer would he be expected to design the bridges of the city?"

"Can you," I queried, "evolve a general rule of precedent which can approximately be made applicable to all cases?"

"Any uniform rule of procedure laid down must be so general in character as to leave great latitude in the choice of methods to be applied by the elected officers of the city, and also to lay upon them the greatest possible amount of responsibility, which would be shifted from them the moment they were compelled by law to follow any given system or to choose their architects from a list dictated by some one else. The city officials should propose what they want to do, and all that the architectural bodies can wisely do is to advise as to the results.



BILTMORE AND ITS GARDEN.—See page 96.

a matter of pride to every citizen. It is a question that will not down, and it is to be hoped it will not be shelved until a solution has been found for it.

Mr. J. Monroe Hewlett has, within the last few years, become one of the most conspicuous of the younger architects in New York. A graduate of the Columbia University school of architecture, he spent some time abroad in study, and ultimately formed a partnership with Mr. A. W. Lord, under the firm name of Lord & Hewlett. This firm has been astonishingly successful in some recent notable competitions, having within the last year won three of the most important competitions held in this country—that for the monument to the soldiers, sailors and marines who served in the War of the Rebellion, for Philadelphia, the new building for the Department of Agriculture, in Washington, D. C., and the new house for the City Club in New York. The winning designs in all three competitions were of remarkable merit and of the deepest interest. It is a record of success almost without parallel in recent architectural history.

"In taking up the question of the relations between the architect and the municipality in public work, and the method that should be followed in making appointments," said Mr. Hewlett, in reply to my question, "it should first be premised that opinions on this topic are not yet settled. The matter has been agitated from time to time, and sometimes with some vehemence; but after all, it is a matter on which neither professional nor popular sentiment are yet agreed. And much fuller discussion among architects upon this subject will probably be found necessary before a definite policy can be outlined to insure improvement in results.

work that will become mandatory upon an administration not so well disposed?

"If legislation is to be had, it must bind both the well and the badly disposed administrations to the same extent; otherwise it will only be operative under the well disposed administration and quite fail in permanency of effect. And, as a matter of fact, what might do very well under a well disposed administration may prove the reverse of satisfactory under different conditions."

"But how," I asked, "are things to be bettered?"

"It would seem," returned Mr. Hewlett, "that such legislation as seems desirable might well be tried before it is placed on the statute books. This, perhaps, is not so difficult as may appear at first sight, if only architects and architectural bodies can agree on what to do and how to do it. No administration, however well disposed, can be expected to follow a method that does not have full or competent professional support. A good administration might, indeed, experiment in bettering architectural conditions, but such experiments could hardly be productive of lasting benefit unless backed by united professional support.

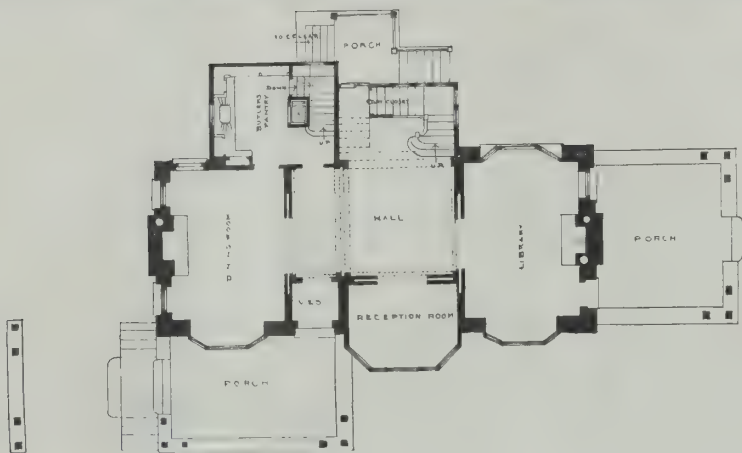
"Some examples of methods applied by the present administration in New York will explain what I mean by variety in methods. The Armory Board recently requested the presidents of the New York and Brooklyn Chapters of the A. I. A. to nominate certain men, and two committees from these nominees have been selected to formulate schemes of competition for certain new armories. Another instance is supplied by the Commissioner of Bridges, Mr. Lindenthal, who has selected Mr. Henry Hornbostel as consulting architect for bridges. Still another instance is furnished by the

"New York City already possesses the necessary machinery to improve architectural conditions, if only the city administration is disposed to utilize that machinery to the fullest extent. The Art Commission, established by charter, seems to be the proper advisory body in all artistic matters which concern the city of New York. It is true it has but one architect upon it, and the labor of passing upon all the plans and projects that must or which might come before it would be too great for one man. But I am convinced that if the powers of the Art Commission were so extended as to require their approval of the designs for all city buildings, this difficulty could be readily overcome by an advisory architectural committee, composed of delegates from the several architectural societies, whose duty it would be to render reports to the Art Commission upon all designs proposed for city work, and thus relieve them from the necessity of a detailed examination of each set of designs.

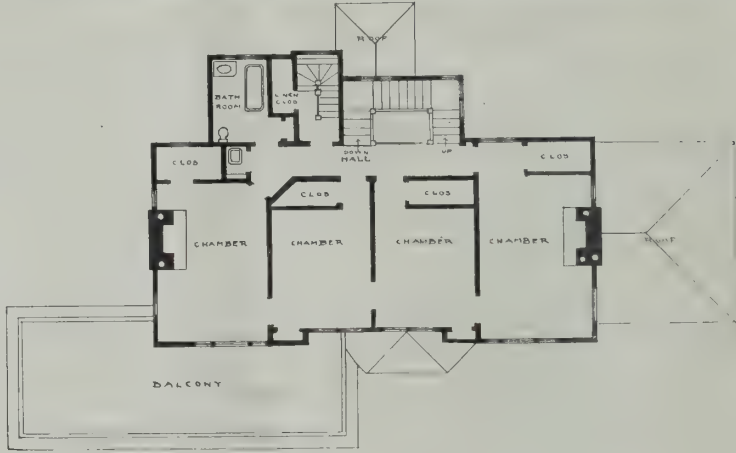
"The Art Commission is a body broadly planned and largely composed of educated laymen, and the method by which it is appointed provides the greatest possible safeguard against the chance of its ever being dominated by any professional clique that might tend to the abuse of such powers.

"This method would surely demand a more sustained and active interest in municipal architecture on the part of the Art Commission and the architectural societies than has ever been evinced before, but if this is the strongest argument that can be alleged against it, it would surely seem worthy of a trial. It is clearly reasonable to exhaust existing possibilities before framing new laws."

BARR FERREE.



FIRST STORY PLAN



SECOND STORY PLAN.

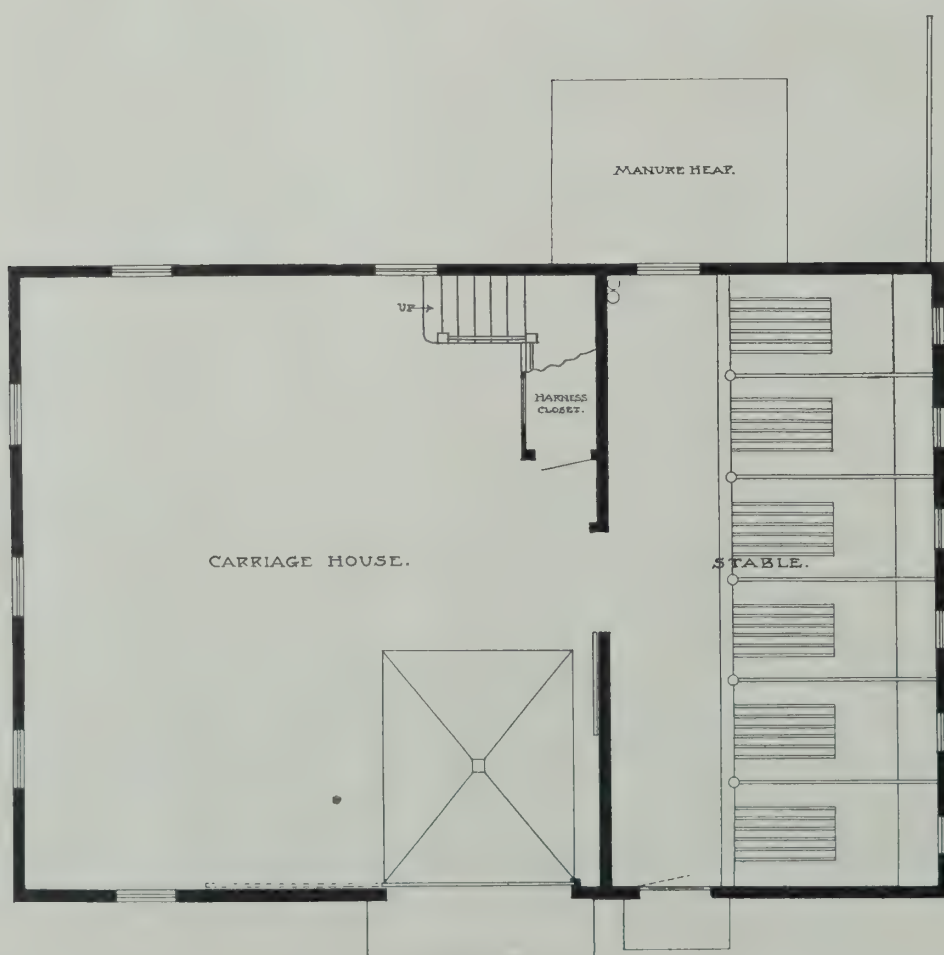


ROSEMARY HALL, GREENWICH, CONN.—See page 96.
MR. HENRY C. PELTON, ARCHITECT.



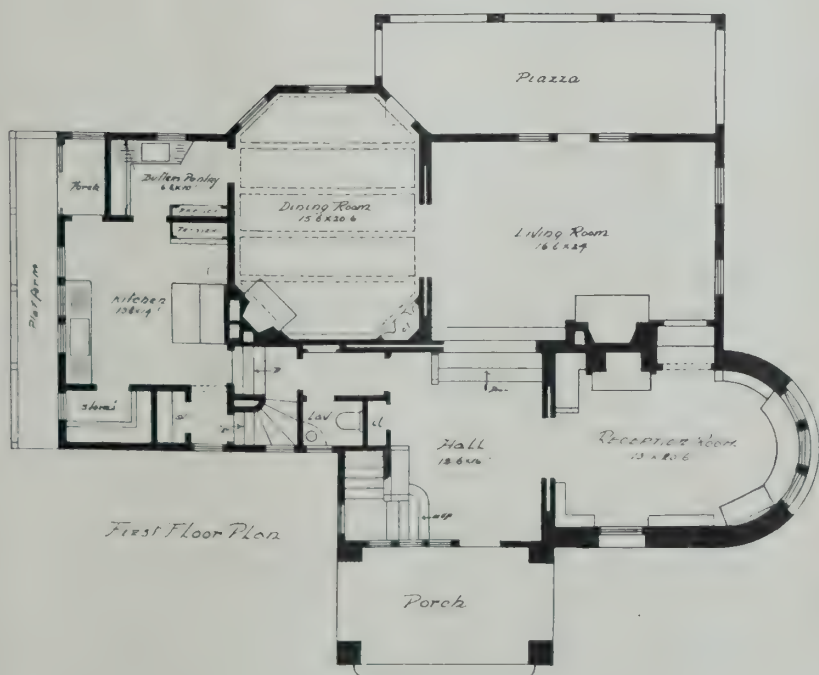
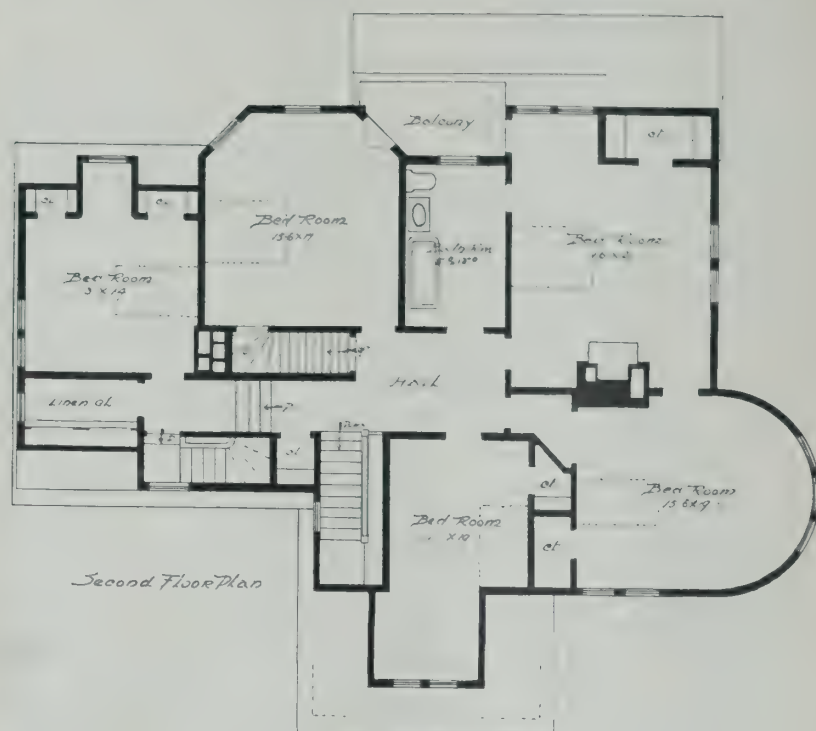
ROSEMARY HALL, GREENWICH, CONN.—See page 96.

MR. HENRY C. PELTON, ARCHITECT.



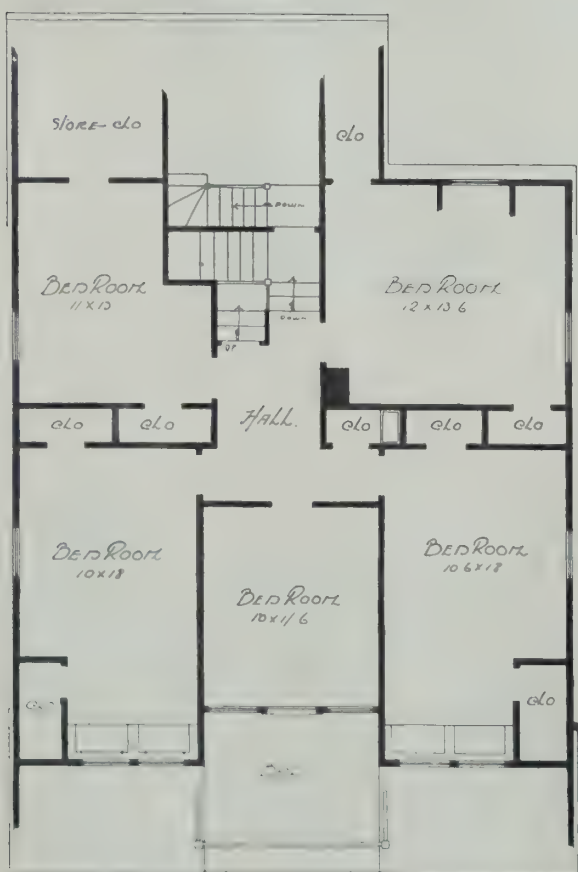
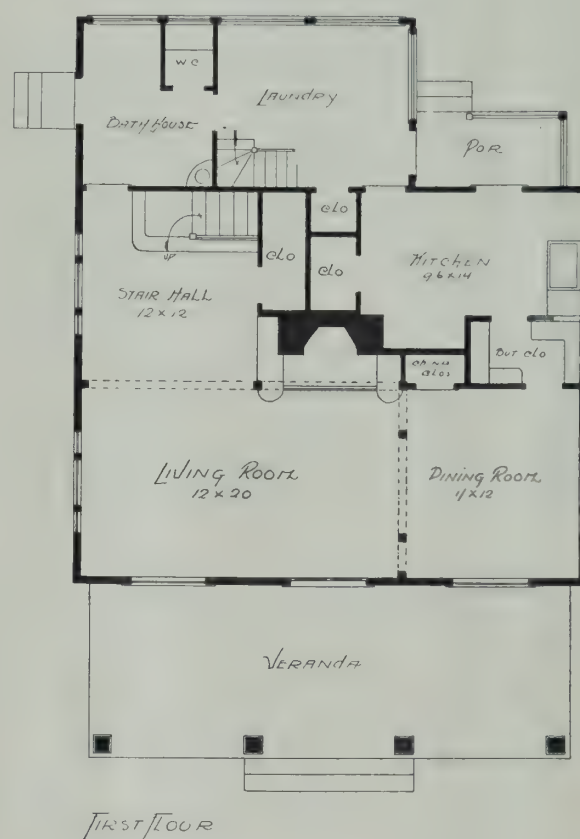
A STABLE AT GREENWICH, CONN.—See page 96.

MR. HENRY C. PELTON, ARCHITECT.



A RESIDENCE AT LAWRENCE PARK, BRONXVILLE, N. Y.—See page 96.

MR. WILLIAM A. BATES, ARCHITECT.



A SUMMER COTTAGE AT WOODMONT, CONN.—See page 96.

MESSRS. DAVIS & BROOKS, ARCHITECTS.



THE PAVILION OVERLOOKING THE TERRACES AND LAKE.



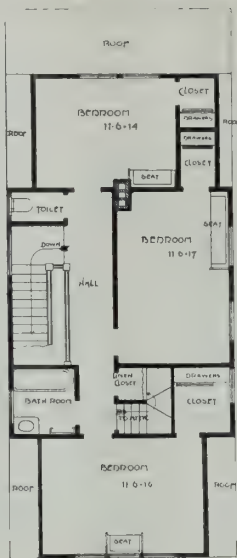
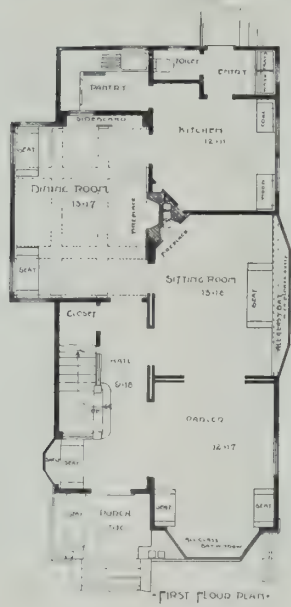
A TERRACE WALK.



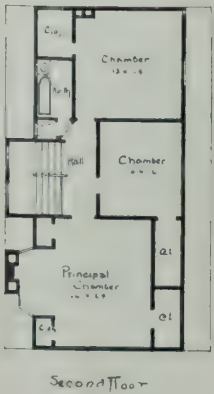
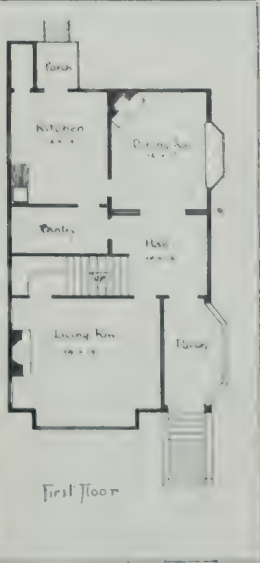
THE STEPS ON THE TERRACES.



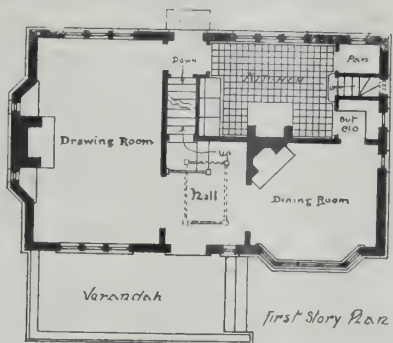
THE GARDEN BY THE LAKE.



A COTTAGE AT OAKLAND, CAL.—See page 96.
MR. A. W. SMITH, ARCHITECT.

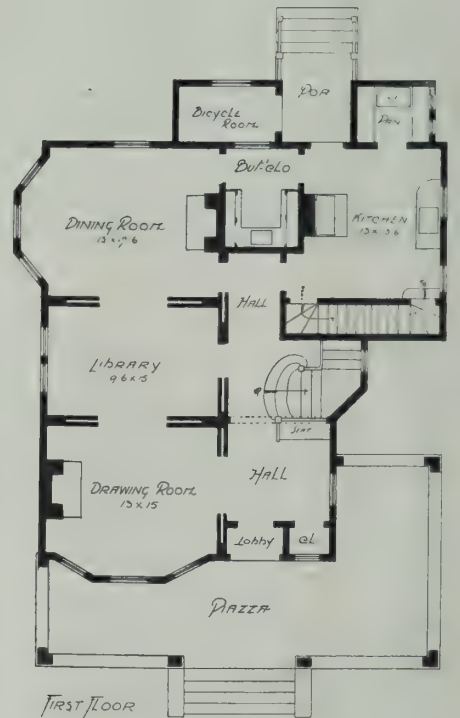


A COTTAGE AT OAKLAND, CAL.—See page 96.
MR. MAXWELL G. RUGBEE, ARCHITECT.



"CANTERBURY KEYS," WYOMING, N. J.—See page 96.

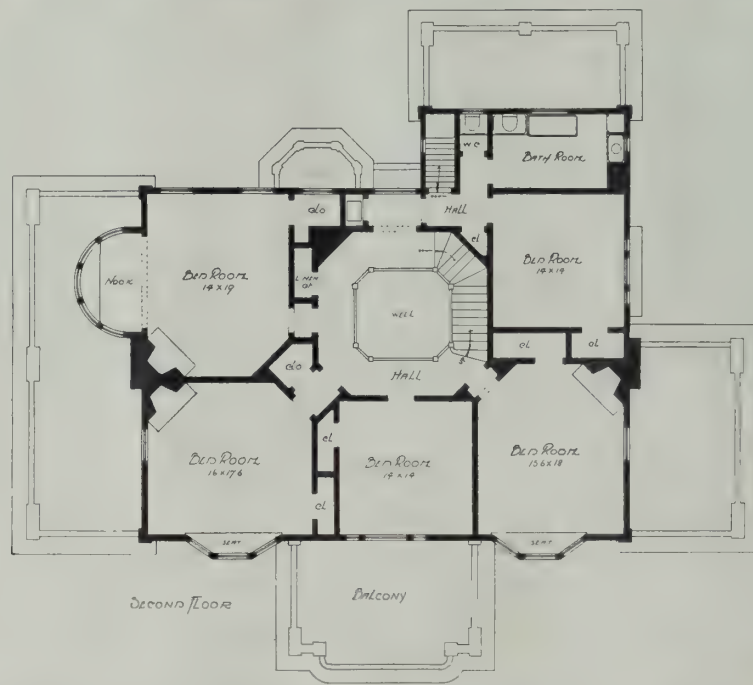
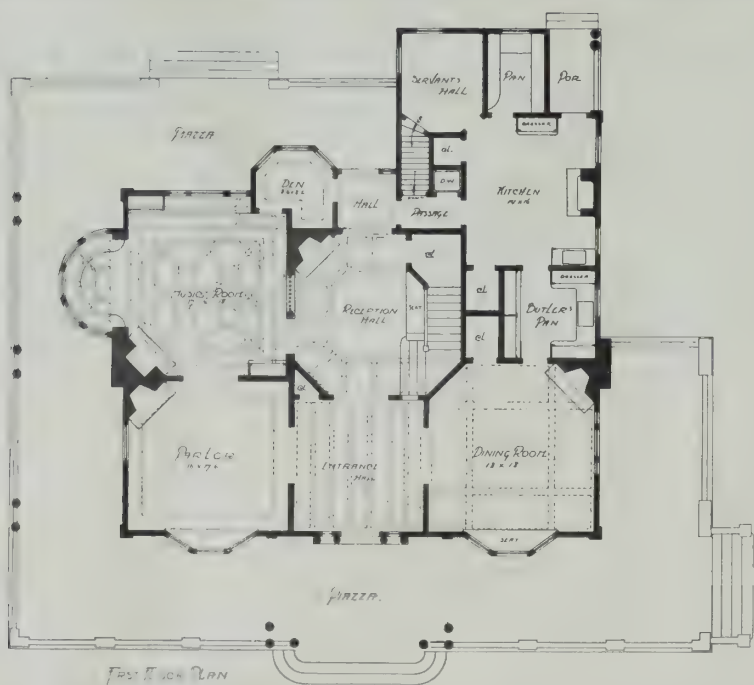
MR. J. W. DOW, ARCHITECT.



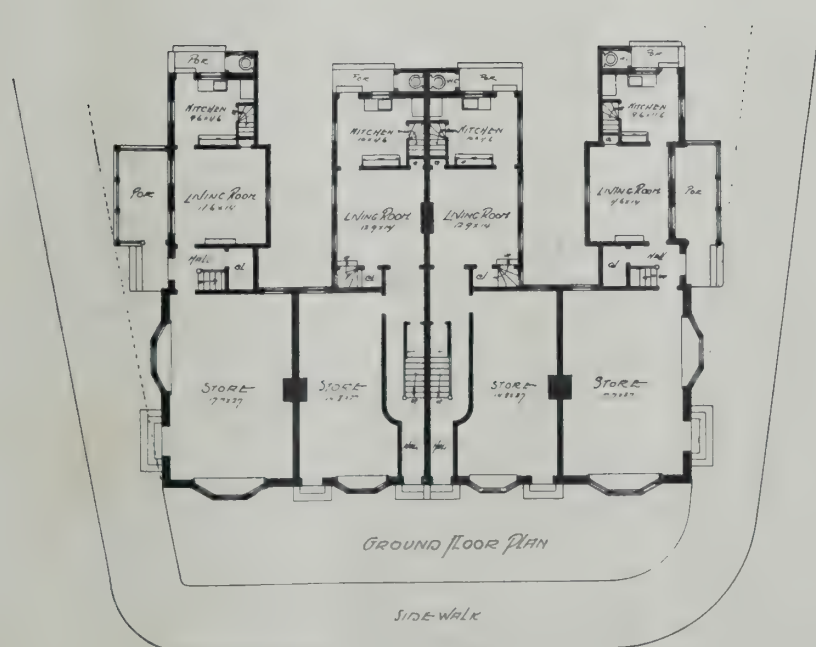
A HALF-TIMBERED HOUSE IN FLATBUSH, N. Y.—See page 96.

MR. JOHN J. PETIT, ARCHITECT.





A RESIDENCE AT PARK HILL, N. Y.—See page 97.
MR. FRANK W. BEALL, ARCHITECT.



A ROW OF SHOPS AT GLENSIDE, PA.—See page 97.

MR. LAWRENCE VISSCHER BOYD, ARCHITECT.

BILTMORE AND ITS GARDEN.

THE illustration on page 83 is a fine view of the great country house of Mr. George W. Vanderbilt, at Biltmore, N. C., and a part of its surrounding garden. This magnificent dwelling was one of the last works of the late Richard M. Hunt; the motif of its design was obtained in the Château of Blois, in France, the splendid open staircase being freely modeled on the similar structure at Blois. Mr. Hunt, however, with that fine appreciation of the fitness of things which distinguished him in his architectural work, did not reproduce the famous château, but created an entirely new and original design. Biltmore is one of the largest country houses in America, as well as one of the most splendid. Historical precedent has been followed, it is true, but remade, redesigned, and the whole recreated for the superb locality in which it was built. The house, as is well known, is surrounded by one of the largest private parks in this country, and the gardens are of great extent and extremely beautiful.

ROSEMARY HALL, GREENWICH, CONN.

ROSEMARY HALL, illustrated on pages 84 and 85, is a residence recently completed for Nathaniel Witherell, Esq., at Greenwich, Conn. It is built of stone and half-timbered work. The first story and underpinning is constructed of rock-faced field stone laid up at random, while the remainder of the building is beamed, forming panels, which are filled in with King's cement, stucco work, and tinted a deep yellow color. The trimmings throughout are stained a dark, soft brown. The roof is covered with shingles and is painted vermilion. Height of cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. 6 in. The hall is trimmed with oak. It has a high paneled wainscoting and massive ceiling beams. The staircase is turned out of oak in an ornamental manner, and is lighted by a cluster of small latticed windows in an effective manner. The reception-room is treated in an old rose and white scheme, with white enamel trim. The library is trimmed with cherry and has a paneled wainscoting, a beamed ceiling, and an open fireplace furnished with tiled facings and a hearth and a mantel supported on columns and handsomely carved. The dining-room is trimmed with Flemish oak and has a high paneled wainscoting finished with a plate rack and a beamed ceiling. The open fireplace is faced with green mottled tiling and with a hearth of the same and a mantel with the mirror over the same. The butler's pantry, of large dimensions, is fitted up with sink, cupboards, drawers, shelves, etc. The second story is trimmed with white pine and painted an ivory white throughout. This floor contains four large bedrooms, seven closets, linen closet, and a bathroom. The latter is wainscoted and paved with tiles and furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains the servants' quarters and ample storage room. The cellar contains a kitchen, pantries, furnace-room, coal and wood bins, and cold storage. Mr. Henry C. Pelton, architect, 1133 Broadway, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A STABLE AT GREENWICH, CONN.

THE illustration on page 86 is a stable belonging to Rosemary Hall, built for N. Witherell, Esq., at Greenwich, Conn. The building rests on a stone foundation. The superstructure is of wood and the exterior is beamed and the spaces between the beams are filled in with stucco work composed of King's stucco cement. The beams are stained a dark, soft brown color and the plaster is tinted a dark yellow. The roof is shingled and is stained a deep red of vermilion hue. Dimensions: Front, 42 ft.; side, 32 ft. The interior throughout is ceiled up with narrow beaded yellow pine, finished natural with hard oil. The bottom is cemented with hard concrete throughout the entire floor space. The carriage-room is large and is provided with carriage, wash, and harness closet. The stable contains six stalls, fitted up with the usual ornamental iron fixtures, etc. The second story contains the hay loft, storage-room, and a man's room. Mr. Henry C. Pelton, architect, 1133 Broadway, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT LAWRENCE PARK, BRONXVILLE, N. Y.

THE house illustrated on page 87 was built for Mrs. A. M. Wellington, at Lawrence Park, Bronxville, N. Y. The porch, underpinning, and front of the first story are of rock-faced local stone laid up at random, while the remainder of the building is built of wood, and the exterior framework is covered with matched sheathing, and then shingles, which are left to weather finish a natural silver gray color. The

roof is also shingled, and the trimmings throughout are painted a bottle-green. Dimensions: Front, 63 ft.; side, 38 ft., not including piazza and porch. Height of ceilings: Cellar, 7 ft.; first story, 8 ft. 6 in., reception-room and hall, and 11 ft. in the rest of the first floor; second, 9 ft.; third, 8 ft. The entrance is into a hall, which is separated from the reception-room by an archway, supported upon columns standing on pedestals. Both the hall and reception-room are trimmed with white pine and treated with white enamel, and the former contains an ornamental staircase with turned newel-posts, balusters, and rails. The reception-room has an open fireplace, built of brick, with facings and a hearth of the same, and the whole is finished with a mantel of Colonial style; it is also provided with paneled seats and bookcases built in. The living-room and dining-room are on one level, and each is treated in a similar manner. The former has an open fireplace with buff brick facings, and hearth and Colonial mantel. The dining-room is fitted up with a paneled wainscoting, ceiling beams, china closets, with cupboards under the shelf, and closets with glass doors over the same, and an open fireplace with brick facings and Colonial mantels. The butler's pantry is fitted up with a sink, drawers, dressers, etc. The kitchen is provided with a range, sink, pot-closet, store pantry, dresser, etc. The rear hall and stairway are conveniently located. The second story is trimmed with white pine treated with white enamel, and contains five large bedrooms, large closets, linen closet, and a bathroom; the latter is tiled and furnished with porcelain fixtures and exposed plumbing. The third floor contains the servants' rooms, trunk rooms, etc. The cellar contains the furnace-room, cold storage, coal bins, etc. Mr. William A. Bates, architect, 100 Broadway, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A SUMMER COTTAGE AT WOODMONT, CONN.

THE summer cottage illustrated on page 88 was built for Mrs. C. P. Merwin, at Woodmont, Conn. The building is constructed on brick piers, for there is no cellar under the house. The spaces between the posts above grade are filled in with latticed work. The exterior framework is sheathed and then covered with red cedar shingles throughout, and left to finish naturally. The trimmings are painted ivory white. The roof is covered with shingles and treated in a similar manner. Dimensions: Front, 32 ft.; side, 35 ft. 6 in., not including piazza. Height of ceilings: first story, 9 ft.; second, 8 ft. The interior throughout is trimmed with North Carolina pine. There is no plastering; the studding and joints are exposed to view and are dressed, while the sheathing and partitions behind the studding is narrow beaded stuff. The living-room, dining-room, and stair hall are treated with butternut brown on the walls and ceilings. The posts rise to the ceiling and form a separation. The living-room contains an open fireplace, furnished with facings and a hearth of red brick laid up in red mortar. On each side of the fireplace is a seat. The brick facing to the fireplace extends to the ceiling. The mantel shelf is formed with bricks corbeled out to receive the mantel shelf, while over the shelf bookcases are built in. The stair hall contains an ornamental staircase. The dining-room has an attractive china closet, fitted up with four drawers below the shelf and shelves above, enclosed with glass doors. The butler's pantry is fitted up complete. The kitchen is sheathed up complete, and it is provided with a sink, range, and a store-pantry. The laundry and bathroom are enclosed with latticework and are provided with slat floors. The second story contains five bedrooms and ample closets, and the attic contains the servants' quarters. Messrs. Davis & Brooks, architects, New Britain, Conn.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A COTTAGE IN OAKLAND, CAL.

THE illustration shown on page 90 is of a cottage on Telegraph Avenue, Oakland, Cal., a city which contains a population largely of business men from San Francisco, who are keenly alive to the opportunities which the prevailing styles of home construction lend to the fine localities which the remarkably beautiful site of the city affords. The architect was A. W. Smith. The building is in the English cottage style; the basement is veneered with clinker brick, laid in Flemish bond, with large white joints. The first story is covered with shingles stained a dark green, and all frames and trimmings are stained in an umber shade. The gables are all plastered and finished with a half-timber design; the plastering, being painted a light cream color, and the timbering, frames, etc., stained umber. The roof is shingled and stained a very dark blue-green. The lower parts of windows in principal rooms are made to swing on hinges, and

the top parts are cut into lattice patterns by wood bars and are pivoted. The interior plastering is of cement plaster and was stippled while being put on, thus giving a surface that, on being tinted, gives a very fine matt surface. The interior woodwork, which is massive, is of California redwood. All doors are wide and low, with shelves over them. The dining-room is paneled with wood to the ceiling, which is provided with very large, heavy beams, and pilasters supporting the beams. The fireplaces are built of rough brick, and an abundance of window seats is provided. The cost of the house complete was \$3,000.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

CANTERBURY KEYS, WYOMING, N. J.

CANTERBURY KEYS, illustrated on page 91, is a residence recently completed for Mrs. Sarah B. Dow, at Wyoming, N. J. The underpinning is of rubble red sandstone from the Dover quarries. The first story is built of North River brick laid up in red mortar. The second and third stories are beamed, and the spaces between the beams are filled in with plaster, composed of Portland cement and sand. The roof is covered with shingles and stained a brilliant red, while the plaster is of a grayish color, and the trimmings are painted a bottle-green. The entrance is into a square central hall, which contains an ornamental staircase. The trim in this hall is of whitewood finished in its natural state. The living-room is trimmed and is treated similarly. It has an open fireplace built of red brick, with the facings and a hearth of the same, and an ornamental mantel. On each side of fireplace is a nook with seat. The dining-room is provided with an attractive bay window and an open fireplace, with brick facings and a hearth and mantel. This room is treated with white enamel paint. The butler's closet is fitted up with drawers, shelves, and cupboards. The kitchen is provided with a tiled wainscoting and a paved floor of six-inch square Dutch tile, making the kitchen sanitary and clean. This kitchen is provided with a Thatcher range, store pantry, sink, wash-trays, and a stairway to the second story. The second story is treated with ivory white paint and contains three bedrooms, a sitting-room, and a bathroom; the latter is furnished with porcelain fixtures and exposed nickelplated plumbing. Two of the bedrooms have open fireplaces. The sitting-room is separated from the bedroom by double-sliding doors. The third floor contains the servant quarters, and ample storage. A cemented cellar contains a furnace-room, provided with a Thatcher furnace, coal and wood bins. Cost, \$5,000 complete. Mr. J. W. Dow, architect, Wyoming, N. J.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A HALF-TIMBERED HOUSE IN FLATBUSH, N. Y.

THE stuccoed and half-timbered house illustrated on page 92 has recently been erected for the T. B. Ackerson Construction Co., of Flatbush, N. Y. This house is located on Beverly Road, at Prospect Park South. The building from the grade line to the second story is covered on the exterior framework with metal lath, made by the New York Expanded Metal Lath Co. This lathing is covered with the usual coats of cement stucco, made of Dyckerhoff's cement. The second and third stories are beamed, and the spaces between the beams are filled in with a similar stucco. The cement work is tinted a cream yellow, while the trimmings are painted a dark yellow. The roof is shingled and is treated in its natural state. Dimensions: Front, 37 ft. 6 in.; side, 44 ft. 3 in., not including porch and piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft. 6 in.; second, 8 ft. 6 in.; third, 8 ft. The hall is trimmed with curly birch, and it contains a paneled seat and an ornamental staircase, with newel-posts rising to the ceiling and forming an arch. This stairway is lighted by a stained glass window. The drawing-room is trimmed with white pine and is treated in white and gold. The open fireplace is furnished with white enamel tile and a mantel. The library is trimmed with curly birch. The dining-room is trimmed with quartered oak, and it has a paneled wainscoting and ceiling beams and an open fireplace with tiled facings and hearth, and a mantel of Colonial design. The butler's pantry is furnished with drawers, dressers, cupboards, and sink. The kitchen is furnished with sink, store pantry, and a Graff Co.'s No. 80 range. The second story is trimmed with whitewood, finished naturally with hard oil, and it contains four bedrooms, six closets, and a bathroom, fitted up with porcelain fixtures and exposed nickelplated plumbing. The third floor contains three bedrooms and ample storage. A cemented cellar contains a Graff Co.'s furnace, coal and wood bins, and a cold storage. Mr. John J. Petit, architect, 186 Remsen Street, Brooklyn, N. Y.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A PAGE OF PORCHES.

A GROUP of four porches is illustrated on page 93. They include the rear porch of the residence of Mr. Goodchild, Wyoming, N. J., Mr. J. W. Dow, architect, Wyoming; a porch to the residence of Mr. Blanchard, Concord, Mass., Mr. H. S. Fraser, architect, Boston, Mass.; porch to the residence of Mr. Chapin, Hartford, Conn., Mr. Ernest Flagg, architect, New York; and a veranda to the residence of Mr. Arthur Bradlee, Chestnut Hill, Mass., Messrs. Winslow & Bigelow, architects, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT PARK HILL, N. Y.

THE illustrations shown on page 94, from photographs of the building taken specially for the BUILDING MONTHLY, are those of a residence recently completed for the American Real Estate Co. at Park Hill, N. Y. The exterior suggests a blending of the French Renaissance and Colonial. The foundations are built of stone, and the underpinning above grade of similar stone, being broken ashlar work. The superstructure is of frame, with the sides clapboarded and painted Colonial yellow, while the trimmings are painted an ivory white. The roof is covered with shingles and is painted a dark red. At each corner of the building are fluted pilasters, standing on paneled pedestals, with elaborate capitals, supporting a wide frieze. The groups of heavy fluted columns under the balcony at the front and on two sides of the house, with the broad verandas and balustrade, give a strong classic feeling to the design. There are two heavy ornamental outside chimneys, built of buff brick. Dimensions: Front, 57 ft.; side, 56 ft., not including piazza and terrace. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The plan shows an entrance hall, which is trimmed with white pine and treated with white enamel. It has a paneled wainscoting 4 ft. 8 in. in height, and a heavy molded 6 in. by 8 in. beamed ceiling; the wall coloring being a light green. Beyond this entrance hall there is an octagonal stair-hall, which is one of the attractive features of the interior; the paneled hall ceiling of the second story being fully exposed to view from the first story, owing to the wide well opening, which makes a gallery in the second story. The parlor has a low paneled wainscoting to a height of window sills, and a 6 in. wood cornice 2 ft. from the ceiling, the space between the ceiling being a large cove. A handsome tiled fireplace and mantel and broad window seat are other attractive features of the parlor, which is finished in cream enamel, with the wall decorations in pink, the ceiling being delicately embellished and tinted in harmony. The music-room is trimmed with mahogany and is wainscoted five feet in height in square panels, and contains bookcases, window seats, tiled mantel, and an elaborate domed ceiling, laid off in a geometrical design, with 4 in. by 6 in. molded stucco members, decorated in old ivory; the wall covering being moss-green. A circular nook, with a paneled seat extending around the same, is separated from the music-room by a broad archway. The den is treated in a similar style and has also a communication with the hall. The dining-room is trimmed with antique oak, with heavy timbered ceilings and high-paneled wainscoting. The tiled fireplace and mantel and the window seat are among the features of this room. A large and conveniently appointed butler's pantry allows of indirect communication with the spacious kitchen, beyond which are the servants' dining-hall, pantry, dumb-waiter, and back stairs. The second story contains six bedrooms and a bathroom, ample closet space, and open fireplaces. This floor is trimmed with white pine treated with white enamel. The hall is lighted by ornamental leaded glass casement windows in delicate tints. The bathroom is wainscoted and paved with tile, and furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains five bedrooms and a servants' bathroom; all finished as in the first story. A laundry, servants' toilet, cold storage rooms, and coal bins are finished off in the well lighted and concreted cellar. The plumbing throughout is of the best Mott's sanitary open-set style. The house is heated by a hot water system, is wired for electric lights, electric bells, and has gas and speaking tubes complete. All the window sash throughout are of an ornamental pattern, formed of narrow bent-wood divisions, and delicately leaded in Colonial designs; low casement windows being provided from all main rooms to the veranda and balconies. Mr. Frank W. Beall, architect, The Sherwood Studio Building, 58 West Fifty-seventh Street, New York.

A ROW OF SHOPS AT GLENSIDE, PA.

THE problem of beautifying the shopping center of a suburban village has been well solved in the successful and happy combination of shops and living quarters erected for Wm. T. B. Roberts, Esq., at Glenside, Pa., and illustrated on page 95. It is a difficult

matter, under the usual circumstances which surround the development of a similar locality, to produce a design with well arranged living quarters in combination with elevations of an attractive and artistic character. The buildings are constructed on stone foundations. The first story is built of red brick laid in white mortar. The second story and gables are beamed in design, and the spaces between the beams are filled in with rough stucco work. This stucco work is painted a deep yellow, while the beams are stained a deep, rich brown. The roof is covered with blue slate. The sash and the trimmings at the first story are painted white. The frontage of the four stores is 77 ft., while the depth of the building is 65 ft. The interior throughout is trimmed with oak on the first story, and white pine on the second and third stories. The first floor of each building contains a store at the front, while at the rear are the living-room and kitchen, provided with all the best modern conveniences. The second story of each building contains a parlor, two bedrooms, with large closets, and a bathroom, fitted up with porcelain fixtures and exposed nickelplated plumbing. There are two bedrooms on the third floor of each building. The cellars contain ample storage in the front for the store department, while the rear is devoted to the use of the family apartment for the storage of wood, coal, etc. Mr. Lawrence Visscher Boyd, architect, 1215 Harrison Building, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A COTTAGE IN OAKLAND, CAL.

THIS cottage, illustrated on page 90, is a recent addition to the many modest homes situated in Oakland, Cal., and cost about \$2,000. Its dimensions are 25 x 50 feet, and it consists of two floors, containing in all seven rooms. Its handsome interior adornments and convenient arrangement make it a cottage of exceptional desirability. Maxwell G. Rugbee was the architect.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

BRICK IN ARCHITECTURE.

IN an address before the National Brick Manufacturers' Association Mr. J. Milton Dyer, architect, of Cleveland, made some interesting suggestions on the place of brick in architectural design and some of the uses to which it could be put. The logical employment of brick in modern architectural composition, he remarked, is more general in Europe than with us. They have sought to understand brick from a constructive sense and to combine it constructively with other material, and in a degree they have been successful in expressing this construction in color. In certain instances brick forms the entire structural framework and leaves the eye in no doubt of its precise rôle in the constructive scheme, while some other material, or a different colored brick, makes up the intervening wall space. At other times stone or iron is called upon to carry and do the work, while brick, in her rosy garb, has but to lie at ease and look handsome.

In the selection of a building material, the decision rests in most cases with the architect. Each building properly studied, presents, or should present, to the architect its own particular point of interest. In some it is an economical consideration, where the aim has been to bring the material chosen and the construction followed in complete harmony with the intended utilitarian use of the building, and the architect is judged, and properly so, after the manner in which he has accomplished these ends. In certain other architectural productions, it is the decorative qualities that decide the material and form the point of interest.

When in the choice of a material brick is permissible, there can be no question that brick, in almost all cases, presents an economical advantage, and this consideration alone, were there no others, has made it necessary for the architect, even he who believes only in stone, to study brick for itself and in its combinations with other materials. But there are other considerations than the one of economy, for it has been abundantly demonstrated that it is possible to accomplish buildings of brick construction, both monumental and modest, of undisputed architectural value, and fortune awaits the architect who learns to use brick.

In using brick the architect must have a color sense, and more skill is required in the design of a brick building or of brick in combination. His unfamiliarity with the medium at his disposal often decides him for the material with which he is better acquainted. And in composing a brick building he is drawn upon for more cleverness in detail structural design. In the spacing of brick for extended, as well as limited wall spaces, knowledge of the different bonds and of the value and direction of joints in design is re-

quired. Often when special brick is required his ignorance of the possibilities of brick causes him to hesitate and to select another material.

The execution of projections in brick necessitates certain modifications in the construction of the courses adopted, but the principle which dominates their composition is to subordinate the decorative effect of projection to the solidity of their construction. The small dimensions of brick form at once its charm and its limitation; its charm in giving color, texture, and interest to wall spaces; its limitation in the difficulty of producing by simple methods horizontal shadows by means of projecting horizontal courses and cornices, and it is in attempting such cornices and projecting parts that brick has suffered the greatest misuse. The play of light and shade is very important, and the architect uses all the possible resources at his command to produce shadow and so avoid the cardboard appearance to his elevation.

With the introduction of moldings and color, naturally more varied designs can be produced. But I am also convinced that brick with wood brick with stone, and brick with iron can be employed with mutual advantage, and that constructively one may supply the limitations of the other, and that every recognized good design in which any two of these materials are used together can not help but be advantageous to both. Constructively, stone supplies the projecting cornices and courses so hard to obtain by brick alone. From a constructive point of view, also, iron enables brick to span distances it would otherwise be unfitted for. In both cases each material should be used honestly, and each find expression in elevation.

NEW APARTMENT HOUSES IN NEW YORK.

THE erection of elevator apartment houses is a feature of current building in New York. A daily paper gives an interesting account of some new ones.

The chief requirements which are being met by the builders of elevator apartment houses, it says, are for large rooms, or for a large number of rooms, and for plenty of light. Heretofore it was considered an unheard-of waste to make only one room out of space which was sufficient for two, three, or four, but with higher rents the builder or owner is willing to make the rooms of reasonable proportions; and so there have been built in some instances apartments of five rooms and bath where six or seven rooms were the rule before. The rooms have, moreover, high ceilings, which are quite an innovation. In the semifireproof style of construction the Building Department permits the structures to be seventy-five feet high when fronting on a sixty-five-foot street, and seventy feet on a sixty-foot street. This is sufficient for a building of seven stories; but in some cases the owners have been content with six stories, which makes the rooms higher and more airy.

When a large number of rooms is required the demand is met by combining two apartments, thus giving twelve, fourteen, or sixteen rooms, with two bathrooms. And these are all certain to be light rooms, for builders nowadays do not merely live up to the letter of the building law, which requires that flats and tenements shall not occupy more than 75 per cent. of the lot or plot on which they are built.

THE PLANNING OF SMALL HOUSES.

MR. R. CLIPSTON STURGIS, the well-known architect of Boston, recently lectured on "How to Plan Small Houses," at the Boston Public Library. A disregard of elementary features in house and grounds was given as the reason for so many inartistic houses at present, together with the uncertain material conditions of the owners.

The elementary divisions of a house, pointed out Mr. Sturgis, are the portion occupied by the owner and family and the portion devoted to the servants and the household economy. In planning a house, it was suitably arranged when the first portion was on the east and south sides of the house, where light and air were abundant. The service portion came in the most desirable positions, and the hallways, staircases, etc., in the darkest, most undesirable places. The connecting link between the two, the dining-room, should be in the place where the morning sun could always be counted upon.

The grounds also have certain divisions, generally lost sight of or are unsuspected, in a poorly planned ground. There should be a forecourt, or portion immediately in front of the house, treated as a screen or not, from a prying public, according to circumstances; a flower garden that may be within view of the owner's portion of the house; a vegetable garden, more remote and placed with special reference to the service portion of the house; a kitchen court, for domestic traffic. Lawn spaces, shade trees, and wider spaces may be disposed around or among these, if available, but the foregoing are the elements that centuries of experiment have prescribed as necessary to good "form" in a home.

Fire Protection

THE protection of buildings from fire is easily the most important problem before the public to-day. The people as a whole may not be interested in the esthetic problems of architecture, they may not be concerned with the beauty of buildings or their scientific arrangement, but an element which destroys one's home, which devastates one's place of business, which brings financial ruin and, often enough, loss of life, comes close home and is a matter of vital importance. From time to time, therefore, a column of notes on this subject will be printed in the BUILDING MONTHLY, for the double purpose of calling attention to the most serious danger that affects our homes and of pointing out such progress as is being made in safeguarding structures.

A recent report made by the Fire Patrol of Philadelphia summarizes the causes of fires in that city, and is a suggestive commentary on conditions that exist everywhere.

BUILDING LAWS.—Defective flues caused 244 fires during the year 1901. Defective flues indicate defective construction, and that indicates defective building laws. One need but to pass into some of the busier sections of our city to see that we practically have no building laws, for there are structures rising one hundred or more feet in the air, and covering practically unlimited ground area, a menace to neighborhoods, and, perhaps, to the whole district surrounding them. I have one building in mind which would destroy the whole of its surroundings if it got fairly on fire, and involve the destruction of many millions of property.

PETROLEUM FIRES.—Four hundred and sixty-two fires from this cause occurred during the year 1901, more than 15 per cent. of the total; while the money loss was not of great moment, aggregating less than \$30,000, the loss of life and injury to persons was enormous. It is reported that, as a result of these fires, about fifty persons lost their lives, and almost 150 others were more or less injured.

UNKNOWN CAUSES.—Unknown again appears at the top of the list of causes of fires, both in number and amount of loss, there being 560 fires and a loss of \$1,657,143 out of a total of 3,017 fires and \$2,058,190 loss.

Mr. Edward Atkinson draws the following lessons from the Park Avenue Hotel fire:

(1.) Wooden dadoes, mopboards, architraves, and moldings varnished are wholly out of place, useless, and dangerous in any and every building of which the main parts are of incombustible material.

(2.) There is always danger of dry bearings in the motive power where greases and oils must be used, which may be ignited, either from the dry bearing or from outside causes. A small expenditure for automatic sprinklers may remove this cause of danger.

(3.) In this case, lath and plaster partitions and one wooden stairway qualified the otherwise exceedingly fire-resistant quality of the building, that building being otherwise less liable to damage by heat than the present type of steel-framed buildings.

(4.) This building may be almost absolutely assured against future loss or danger by carrying lines of automatic sprinklers through all the main hallways and over the stairways as well as in the elevator shafts. This area of carpeted surface, such carpets being necessary to deaden sound, covering about seventy-five thousand square feet, can be protected by an automatic sprinkler service at a cost considerably less than three thousand dollars.

These lessons, which the proprietors of this hotel have learned at a dreadful cost, ought to be applied in all the so-called fireproof hotels of the country, the present dangers being not so much to property, but to loss of life by suffocation.

(5.) The employees of every hotel ought to be trained by monthly or weekly drill to take their places in case of fire, not only in the use of such apparatus as there may be in each hallway in the way of extinguishers, fire hose, and the like, which are practically useless except in trained hands, but also to guide the frightened guests toward the fire escapes. It is a good plan to invite visits, say quarterly, from the firemen at the nearest fire station, so that they become familiar with the building and its safeguards. There should also be electric bells to be sounded in every hallway and bedroom in case of fire. A railroad man suggested to Mr. Atkinson another precaution, namely, that on each main hall on every floor the watchman should be supplied with a megaphone, by which he can signal throughout the hallways and give direction in case of need to the frightened guests.

New Books

THE BOOK OF A HUNDRED HOUSES. A COLLECTION OF PICTURES, PLANS, AND SUGGESTIONS FOR THE HOUSEHOLDERS. Chicago: Herbert S. Stone & Co. 1902. Pp. 403. Price, \$3.20.

This is much more than a picture book, the title page to the contrary notwithstanding. It is a series of articles on houses, house building, house planning, houses of note at home and abroad, and various matters connected with houses. The contents of the book are a bit miscellaneous. There is no apparent reason, for example, why a chapter should be devoted to "Adelina Patti's Castle" in a book intended, primarily, to instruct the American house builder in the esthetics of his art, and the illustration that accompanies this description is not only particularly bad, but is quite out of keeping with the other pictures. No editor's name is given, and that doubtless accounts for the omission of some desirable information. Thus an article on "Munstead House" is included, with many illustrations, but no hint is given of its situation.

The book is, however, a most useful one. Much of the text is both interesting and stimulating, and the illustrations, while very uneven and not always of equal interest, are on the whole of a high quality. It is a book that speaks for the good and the best in domestic architecture, and it is, therefore, a welcome publication, full of excellent suggestions and helpful in many ways. Exception must, however, be taken to the scriptural comparisons in the opening chapter on "How to Make a Successful House," which are in bad taste and quite without point.

The contents of the book may be classified on certain well denned lines. Most important are the suggestive articles, chapters dealing with general principles and generalities and applicable to all good house design. These include the opening paper already referred to; one on "House Planning in the Country," one on "The Hillside Problem," and another "In regard to Cottages." The remaining chapters relate to recent American houses, which illustrate some fine examples of country houses, with perhaps a predominance of Western examples; historic houses abroad and in America, and houses whose ownership attracts attention, as those of Mme. Patti and Mme. Modjeska. The Western houses, which are here particularly illustrated, are of special interest, not only because most of them are interesting types of recent dwellings, but because they are practically new to Eastern readers, and thus possessed of the charm of novelty.

While in no sense a treatise on house building as a whole, every intelligent student of the problem of the artistic treatment of domestic architecture will find much of interest in this volume. It is the esthetic side of house building it is concerned with: scientific problems are hardly touched on. But the esthetic side of house building is a most important one. It is the aspect of architecture that most generally appeals to the untechnical reader, and it is the phase of house making which most directly attracts any one whose interest has been aroused in the subject of house building in any sense. If a house "looks" well, it is fairly well established that it has been designed by an architect; and it certainly will not look well long unless it has been well built, and is serviceable and useful as well as ornamental. From the sanitary standpoint—which, in a certain sense, is the true measure of the value of house building—this may leave a good deal wanting; but a well equipped architect will generally be able to take care of the sanitary aspects of his house without any detriment to its esthetic appearance. A well designed house, therefore, one that composes well, that is suited to its environment, that is built of good materials and gives evidence of taste and culture on the part of the man who designed it, is more likely to be a better house from a scientific and sanitary standpoint than one which is deficient in these qualities. A house that looks bad is apt to be bad; one that looks good is apt to be good.

And so we may be glad that the publishers of this beautiful volume have brought together so many interesting examples of well designed houses, have given us descriptions of their interiors, have described their materials, and made clear their general surroundings. The house builder and the house builder that is to be can not become too familiar with examples of good houses. This book will tell him much that he ought to know, and the pictures will help to a clearer understanding of the whole subject. The illustrations, as a rule, are excellent in quality and often of a high interest.

The Garden

THE garden of the Hunnewell estate, at Wellesley, Mass., views of which are shown on the cover and on page 89, is one of the oldest and most remarkable in America. Garden craft is a comparatively young art in this country, yet this garden is the result of fifty years of labor and attention from its present owner, whose work in this connection long since brought him fame in America and in Europe. It comprises about sixty-five acres in a fine rolling country, every natural feature of which has been availed of in the design of the garden.

Of the many interesting features that make this estate remarkable none is more striking than the topiary work, in which Mr. Hunnewell has been a pioneer, and in which, in fifty years, he has accomplished results as striking as several centuries have produced in England. This style of gardening consists in cutting trees and shrubs into ornamental shapes. It has long been a favorite form of gardening in England, where many great estates possess numerous remarkable examples of this art. It belongs, of course, to the formal garden, and is out of place in any other. Mr. Hunnewell's success has been the more notable since in England the results have been achieved with yews, which do not thrive in the New England climate. He used, therefore, such trees as would thrive here, and employed pine, spruce, hemlock, junipers, arbor-vitae, cedars, and Japanese retinosporas. When planted these trees were very small, and for twenty years their growth was retarded twice annually in order to induce a compact and close habit. Many of them are now more than forty feet in height and sixty feet in circumference, the hemlocks especially having been highly successful.

In some respects the grounds of this estate may be compared to a private arboretum, for they are closely planted with an immense variety of trees. Between 250 and 300 specimens of cone-bearing trees are on the grounds, many of them being exceptionally fine examples, and a number of great rarity. Deciduous trees are also in abundance, but the cone-bearers are a special feature.

A terrace garden borders the lake. Below it is contained within a marble retaining wall; above is a pavilion with red roof-tiles supported by red sandstone. The terraces have been treated as Italian gardens, although the trees employed in them are American and hence strange to the Italian system. And this is one of the chief charms of this beautiful garden, that it shows the adaptability of American trees and shrubs to the difficult art of Italian design.

To the south of the house is a fine grove of pines, including an avenue bordering a walk. Beyond them is the rhododendron garden, with a trellised arbor, to which curtains may be attached to shelter delicate plants. To the left of the rhododendron garden is the holly path, between beautifully rounded hedges of arbor-vitae, which are as well cared for as any in England and quite as beautiful. Beyond the hedges are the greenhouses, stables, and flower garden. The flower garden is filled with rich bloom in the height of summer, and here, in the autumn, is a magnificent display of chrysanthemums. The vegetable garden has, of course, its place in this finely managed estate, but it is the formal garden, the trees, the flower garden—the ornamental aspects that attract attention and command the interest of every lover of nature who may be familiar with it.

The Hunnewell estate has long since demonstrated many important facts in American horticulture. The gardens of Europe, with their marvelous advantage of centuries of growth, are apt to be at once the envy and the despair of American gardeners. Mr. Hunnewell has shown that, in fifty years, it is possible, with suitable care and attention, to produce a garden in this country which for beauty and elaborateness will favorably compare with many Old World gardens. He has shown, further, that American trees and shrubs, or trees that are hardy in this country, are as capable of formal treatment as the trees more ordinarily used for such purposes abroad. He has shown that many trees of many varieties can be artistically grouped and arranged, and that an outdoor museum of plants may be as attractive and as beautiful as though their beauty and adaptability to beautiful effects were the chief objects sought. And further, he has shown, by his loving care and keen interest, how much the cultured American can do for landscape art if he but go about it in the right way.

It is an interesting fact that this splendid property is guarded by no porter's lodge, and that the grounds are freely open to all who may care to visit them.

The Country House

HERE is a description of a kitchen in a country house which has already appeared in print, but which is worth reproducing:

It is a blue and white room. Around the hearth the floor is of blue and white tiles, though the rest of the floor is laid with wood and covered with a blue and white linoleum. This, it is explained, is because the unyielding tiles are tiring to the maids' feet. The walls are of glazed tiling, white, with blue decorations. The woodwork is all white, with a hard enamel finish. The sink is of white porcelain, and the built-in refrigerator in the little annex to the kitchen is of the same composition. The cooking utensils are of white agateware, the shades are white, and some muslin sash curtains are of a thin washable material in a Delft blue design. The chairs and tables are in white enamel, the cooking table having a heavy plate-glass top. All the shelves of the dresser are finished with a fine coat of white enamel. There are no tucking places anywhere; everything is open, airy, and spotless, and no coal range will be used. The kitchen china is blue and white, and all the toweling patterned in similar colors.

A New York dealer in household supplies recently put forth some views on the furnishings of country houses:

It is generally admitted, he said, that quaintness and picturesqueness rather than splendor should distinguish the country house. The brilliant wall coverings which are now conspicuous in the market were among the first of the new things designed for the country house to attract attention. Plain effects for the time being are cast into the shade by a veritable riot of color. For the living-room there are landscape papers of many varieties of color, which to some extent give the effect of tapestry minus the figures. Hills and valleys, trees and sky, together with growing plants, furnish a pastoral environment which makes it necessary to banish framed pictures from the walls. Other patterns, bolder and more gorgeous in color, which come from noted French designers show tropical birds and mythological designs needing a large room for their proper display. Furnishing a happy medium between these luxurious examples and the old-fashioned plain designs are some which are a faithful representation of the two-toned satin brocades which lately have played such an important part in the decorations of the walls of city houses.

Fashion now gives prominence to leather and leather effects for the walls of the dining-room and main hall. The same idea can be carried out in fancy leather of domestic make, and even in imitation leather, which is a sort of papier mâché. The more elaborate the pattern of the leather the more stylish it is considered, and where plain leather of a uniform color is used, an elaborately patterned frieze surmounts it.

The newer bedroom wall papers represent a luxuriant flower garden, and the larger the designs the more modish they are. A plain or a striped background strewn with bouquets shares popularity with one covered with huge single blossoms or with flowering vines. No frieze is used with these designs, flowers and vines clambering clear to the ceiling without a break. Another treatment is a perfectly plain pale green or pale pink papered wall, above which is a ceiling covered with paper in imitation of a lattice work of vines blooming with pink roses.

Door and window draperies, says the same authority, should be easy to solve this year. There are any number of new and very stylish materials, comparatively inexpensive. Among the cottons suitable for portières and for upholstering purposes, are Cairo lattice and Singapore lattice—curiously wiry materials and yet with sufficient weight to be effective. Old style moreen is a flax goods both striped and plain and in art colors; arras, a drapery not unlike burlap, and Guildhall tapestries, of both linen and cotton, in every desirable tint; plain in pattern, except for the small raised dot indicative of the Guildhall weave, and also in bold designs of stripes and flowers. A novel window drapery is Calcutta net, cream, delicate green, pale yellow in color. The cream is the best. Calcutta net is more durable and much heavier than the majority of window nets. Anatolian net is prettier than the Calcutta for the reason that the open mesh is smaller and finer and is marked off into four-inch square blocks with a plain half-inch wide stripe. Vitrage net, heavier than the others, has also an open mesh, and besides these there is a dainty Venetian cotton in white and in the very palest green.

The Household

A NEW YORK paper prints some useful hints on the decorations and furnishings of a nursery. A nursery should, if possible, have a south or southwest aspect. On many days when the ground is too wet for outdoor exercise, while the sun is shining, the windows of such a room may be opened widely, the children warmly dressed, and allowed to play for an hour or two, having the advantage of fresh air without the danger of wetting their feet.

A pretty scheme of color for a room looking due south is carried out as follows: The walls paneled in wood to the height of four feet, painted a dull, soft blue, and varnished. Above the wood a covering of a surprisingly pretty Japanese cotton, a white thin stuff, upon which any color looked well, the daintiest china or palest picture. A deep bay window was hung with four short chintz curtains, which, upon a cream ground, bore stripes of soft blue, with bunches of violets, the lining being of a similar shade of blue. Thick cream linen blinds were used, as the room was extremely sunny. A set of "play shelves" was painted white, and hung with curtains of the blue striped chintz. Wicker easy chairs with covers of chintz, with frills of plain blue linen, and on the mantelpiece a long strip of chintz, also frilled with linen. In addition to the wicker chairs for "grown-ups" there were three very low "beehive" chairs suited to the shortest of legs. The fender was extremely pretty, while affording as much safety as any of the ugly, old-fashioned high fenders. The cradle was of the utmost simplicity, in oak, and hung with white silk curtains, up which trailed lines of daisies embroidered in their natural hues.

New fashions, new designs, new things for the household, are the life of the trades which cater to this necessary feature of existence. The manufacturer's standpoint is rather apt to be that it is not so important that an article should be good as that it should be "new." Variety, it would seem, is the life of trade as well as the spice of life. And so, on every possible occasion at which a new idea or a new device can be submitted, it is forthwith placed on the market and urged as the "very latest." Most people, perhaps, can not have the latest in house furnishings simply because it happens to be the latest; but the keen competition to keep ahead of one's competitors helps industry and helps design by creating new opportunities and by stimulating manufacturing. Some things, of course, have the useful quality of wearing out, and replenishing is imperative, whether it can be afforded or not. The "new" things have, therefore, a real utility and a ready market that appears inexhaustible.

The housekeeper who would keep ahead of the times has, therefore, a vast variety to choose from and a bewildering line of excellences from which replenishment can be made. "New" chairs, "new" tables, "new" sideboards, "new" curtains, "new" carpets and rugs, "new" linen, all offer themselves to the buyer and all promise new notes of attractiveness in even the most amply supplied households. As a whole the tendency of all "new" articles is toward an improvement on the old. Our manufacturers have not yet learned how to turn out masterpieces by machinery, but they have learned the value of improving on their previous attempts. The art value of much of this new work may not be great, but it indicates an improvement in general taste that can not but be helpful, and which is decidedly to be commended.

The strange statement has been made that there are people in the world who buy folding beds because they like them, and who, being willing to pay large prices for them, enjoy them as articles of household adornment. There does not seem any reason for such a condition of affairs, and when we are further told of a house with many large bedrooms containing only folding beds one can but rub one's eyes and ask what next? The folding bed is an article of utility, but it is difficult to view it as an article of ornament. Its proper place, and its only place, is in a small room where space can not be had for an open bed. It is decidedly unsanitary, because it is generally kept closed throughout the day; some people would have us believe it is dangerous, because it has been known to fold up of itself and embrace the sleeper with sometimes fatal conclusions; it is seldom beautiful, even though it may be a handsome article of furniture, for it generally aspires to be something which it is not. A handsomely carved chest or a wardrobe, if one must have a heavy piece of carved furniture, would be more logical and more beautiful.

Legal Decisions

ADDITIONAL COMPENSATION.—The specifications for the construction of a city hall stated that proposals would be received for either steam or hydraulic elevators, and included specifications for each. A bid for the construction of a building by plaintiff included the construction of the elevators, but the kind was not stated, and the building contract awarded to him only required him to construct the building according to the plans. The city refused to allow the installation of steam elevators, and required hydraulic elevators. *Held*, that the contractor could not recover additional compensation for the difference in cost of the elevators. *Riesen vs. City of Milwaukee*, 88 N. W. Rep. (Wis.) 594.

ARCHITECT'S CONTRACT.—A contract with an architect provided that he should draw plans and specifications for a court house not exceeding in cost \$100,000, and should make changes and furnish new plans without additional expense in case the bids should exceed \$100,000, or the commissioners for any reason required new or changed plans, and that as compensation the architect should receive "five per cent. of the total cost of the completed building." *Held*, that where the commissioners ordered changes and additions, so that the total cost of the building exceeded \$100,000, the architect was entitled to five per cent. of the actual cost. *Weatherhogg vs. Board of Commissioners of Jasper County et al.*, 62 N. E. Rep. (Ind.) 477.

BOND INDEMNIFYING AGAINST LIENS.—It would seem that the execution of a bond to an owner by a contractor to indemnify the latter for the claims of subcontractors does not imply an agreement on the part of the owners that such subcontractor shall be paid, so that the owner may not make payment to the contractor, even in accordance with the terms of the contract, without seeing that subcontractor's claims are satisfied. *Slagle et al. vs. De Gooyer et al.*, 88 N. W. Rep. (Iowa) 932.

CERTIFICATE OF ARCHITECT.—In a suit for a balance due on a building contract which provided a specified sum as damages for delay in performance, and that payments should be made on written certificates of the architect that they had become due, the contractor testified that the architect stated that he personally would not insist on a deduction for delay, but that defendants had given him thirty-two days as the time performance had been delayed, and insisted on a deduction; that he expected to get more from them, and would have to yield to their demand. No pressure or undue influence on the architect was shown, but defendants testified that their action was in good faith. *Held* not sufficient to impeach the certificate of the architect determining the amount due and allowing a deduction for thirty-two days' delay. *J. G. Wagner Co. vs. Cawker et al.*, 88 N. W. Rep. (Wis.) 599.

CLAIM OF LIEN—COLLATERAL SECURITY.—M. made contracts to do work on P.'s house, none of which were recorded, and purchased material from L. and J. During the progress of the work, M. executed to H. a note, and assigned to him as security all money due and to become due under the contracts. H. assigned the security to G., and transferred the note for value to F., who was ignorant of the material men's claims, of which both H. and G. were aware. Subsequently M. became insolvent, and F. filed the note with the assignee in insolvency as an unsecured claim, and the assignee refused to allow it, so that F. took nothing from the assignment. About ten months after completion of the work on P.'s house, G. sued P. on the security assigned to him by H., and the material men, after notifying P. of their claims for the first time, intervened. F. also intervened, alleging ownership of the note, and that the assignment of the security to G. was for his use, and that G. held it as pledgee and trustee, and was prosecuting the action thereon for his (F.'s) sole use. *Held*, that F. was entitled to the enforcement of the security for his benefit, since, if G. was F.'s pledgee, he could sue for F.'s benefit, and, if he received the assignment of the security independently and in his own right, he took no title, and the security would follow the note, giving F. the equitable title thereto. *Perry et al. vs. Parrott et al.*, 67 Pac. Rep. (Cal.) 144.

GARNISHMENT OF BALANCE DUE.—A balance to become due on an uncompleted building contract, entire and indivisible in its nature, is not subject to garnishment. *Medley vs. American Radiator Co. et al.*, 66 S. W. Rep. (Texas) 86.

New Building Patents

THE following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY by MUNN & Co., Solicitors of American and Foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

TILE FLOOR. R. L. Moyle, New York, N. Y. March 18. 695,621
COMBINATION TILE FOR FLOORS. R. L. Moyle, New York, N. Y. March 18. 695,647

CONSTRUCTION.

REINFORCED CONCRETE CONSTRUCTION. E. L. Ransome, New York, N. Y. March 4. 694,577, 694,580
METAL STUDDING OR PARTITION. P. Brandstedt, Washington, D. C. March 4. 694,721
CHIMNEY CAP. Charles J. Quinn, Scranton, Pa. March 11. 695,170
SHEET METAL COVERING FOR ROOFS OR OTHER SURFACES AND FASTENING DEVICES THEREFOR. G. T. Williams, Denver, Colo. March 18. 695,523
BUILDING CONSTRUCTION. A. Goodman, San Francisco, Cal. March 18. 695,718
BUILDING BLOCK FOR FLUES. E. L. Moore, Portsmouth, Ohio. March 18. 695,822
WALL PROTECTING DEVICE. Taylor and Tolman, Orange, Mass. March 25. 695,965
BUILDING MATERIAL. M. W. Marsden, Philadelphia, Pa. March 25. 696,062
METAL WINDOW SASH. H. C. Smith, Cambridge, Mass. March 25. 696,110
ROOF JOINT. C. A. Granton, Haverhill, Mass. March 25. 696,139
BUILD-UP COLUMN. W. H. Peard, Mt. Vernon, N. Y. March 25. 696,188

CARPENTRY.

DOOR STRIP. J. W. Housberg, Pittsburg, Pa. March 11. 695,054
WEATHER STRIP. F. E. Allen, Boston, Mass. March 25. 695,993
REVOLVING WINDOW SASH. A. Weingaertner, St. Louis, Mo. March 25. 696,287
WEATHER STRIP. B. F. Higgins, Centralia, Ill. March 25. 696,335

ELEVATORS.

INCLINED ELEVATOR. J. W. Reno, New York, N. Y. March 25. 696,193

FIREPROOFING, FIRE-EXTINGUISHMENT.

FIREPROOF FLOORING. J. B. Hinchman, Denver, Colo. March 4. 694,381
FIRE RESISTING PARTITION, WALL OR THE LIKE. W. Seefels, London, England. March 4. 694,583
FIREPROOF CONSTRUCTION. P. Brandstedt, Washington, D. C. March 4. 694,720
FIRE ESCAPE. F. Bielhen, St. Joseph, Mo. March 11. 695,140
FIREPROOFED WOOD AND METHOD OF MAKING SAME. J. L. Ferrell, Philadelphia, Pa. March 18. 695,678
FIREPROOF COVERING FOR FRAME STRUCTURES. R. Hellman, Brooklyn, N. Y. March 18. 695,722

HARDWARE.

HINGE FOR SUPPORTING AND OPERATING DOORS. W. L. Selleck, Platteville, Wis. March 4. 694,432
SASH PULLEY. A. Johnston, Ottumwa, Ia. March 4. 694,482
SASH FASTENER. W. Carrick, Boston, Mass. March 4. 694,612
SASH LOCK. G. W. Anderson, Bloomington, Ill. March 4. 694,816
SASH FASTENER. A. C. Hendricks, Waynesboro, Pa. March 4. 694,856
SASH FASTENER. W. R. Abrams, Portland, Ore. March 11. 695,263
SASH FASTENER. B. Murphy, New Haven, Conn. March 11. 695,327
LOCK. R. H. Hearn, Dyer, Tenn. March 18. 695,642
SASH LOCK. H. H. Kendrick, Fulton, N. Y. March 18. 695,736
DOOR, CATCH AND LOCK. R. C. Secker, Southampton, N. Y. March 18. 695,888
DOOR CLOSER AND CHECK. F. A. Winslow, Chicago, Ill. March 25. 695,987
HINGE. C. H. Foster, Omaha, Neb. March 25. 696,027, 696,028, 696,029
SASH STOP AND FASTENER. J. O'Donnell, Rhinelander, Wis. March 25. 696,073
WINDOW BALANCE. F. W. G. Boettcher, Detroit, Mich. March 25. 696,308

HEATING AND VENTILATION.

VENTILATING APPARATUS. W. H. and J. F. Jordan, Brooklyn, N. Y. March 4. 694,648
DOMESTIC FIREPLACE OR HEARTH. W. H. Haslam, Bolton, England. March 25. 696,040
HOT WATER RADIATOR OR HEATING STOVE. J. W. Ewart, London, England. March 25. 696,096

PLUMBING.

FLUSHING TANK. Peter F. Glackin, Pittsburg, Pa. March 4. 694,627, 694,629
FAUCET. J. E. O'Lally, Boston, Mass. March 18. 695,697
WATER CLOSET VALVE. A. G. Alexander, Detroit, Mich. March 25. 695,898
FAUCET. N. Curtis, Boston, Mass. March 25. 696,135

TOOLS.

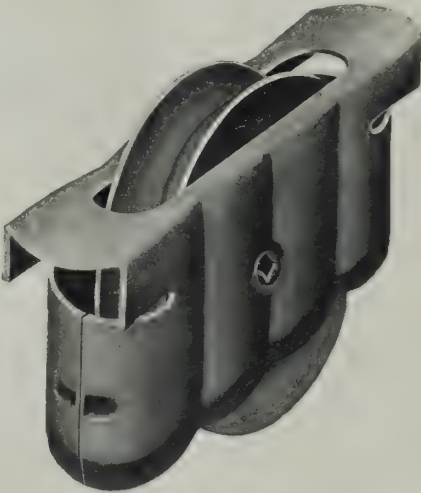
FLOORING SET. J. D. Murphy, Chicago, Ill. March 11. 695,224
ROOF FRAMING TOOL. E. G. Pettit, Marietta, Ohio. March 11. 695,339

WOODEN PAVEMENTS.—Wooden pavements abroad are often sprinkled with sand to reduce the tendency to slip. Soft wood blocks, especially those creosoted, have a rather slimy surface, making them probably more slippery when wet than harder blocks having a surface unaffected by moisture. There are no calks on the horses' shoes, which renders such sprinkling more necessary. It is an advantage that wood pavements may be so sprinkled and slipping thereby reduced.

Publishers' Department

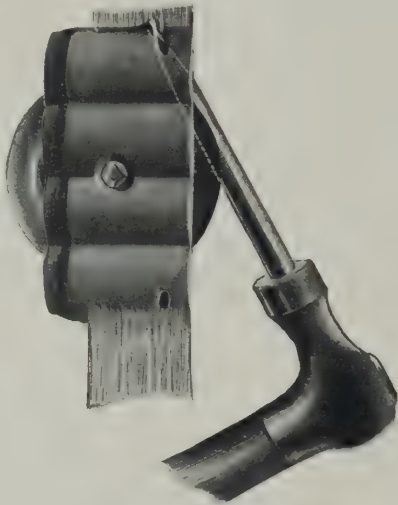
STEEL SASH PULLEYS.

THE Fox Machine Company, of Grand Rapids, Michigan, is the original manufacturer of the steel sash pulley, and has just added another to its list, which is called the New No. 11. The illustration given here shows a device having the patent double shouldered



THE NEW NO. 11 SASH PULLEY.

steel bushing and square shouldered axle. The pulley has the round end face. The shell is reduced on the bottom so that it enters the wood very easily, and the two end corrugations in the shell are formed so close to the wheel that the cord can not possibly slip off. The formations on the ends of the shell give a very firm bearing against each other, and make it impossible for one side of the shell to slide by the other. The second cut is a different view, showing the manner in



THE FASTENER.

which the pulley is fastened into the frame. The New No. 11, in all its parts, is the same wheel as the company's No. 3 and No. 7 pulleys, except that it is just two inches in diameter. The Fox Machine Company also makes universal trimmers, multiple spindle drills, milling machines, shapers, punch presses, machine tools, wood trimmers, miter machines, machine knives, dado heads, bicycle tool machinery, and the popular "Fox Typewriters." The office and works of the Fox all-steel sash pulleys are at North Front and Fourth Streets, Grand Rapids, Michigan.

STEAM AND HOT WATER HEATING.

THE subject of heating for residences constantly receives attention, for the adjustment of temperature is a most important essential of the modern and healthful home. Comparatively few are aware of the great comfort, evenness of heat, freedom from irritations, and the economy of fuel that is attained by the use of the best low pressure steam and hot water heating of to-day. Heat derived from a steam and hot water system is most healthful; the pure air in a room being heated by its contact with the radiators, and unmixed with gas and dust. The heat is perfectly distributed, the temperature as evenly regulated as may be desired. Ease of management is secured by the simple arrangement of the boilers, so that the average housewife can attend to them with very little care and attention. The Furman boilers for steam and hot water heaters, made by the Herendeen Manufacturing Company, are perfectly adapted to secure the best results mentioned, and the cut represents the highest type and most compact style of boiler efficiency yet attained by the im-

provements it has made in this line of work. It is only one of the many designs made by this company, whose boilers are very widely used, and have for years been



NEW SECTIONAL BOILER FOR STEAM AND HOT WATER.

extensively specified by leading architects. The home office and works of the firm making the Furman boilers and radiators are at Geneva, New York.

TIN ROOFING.

TERNE plate (roofing tin), which has always been a most favorable roofing material in the United States, is a sheet of iron or steel, coated with an alloy of tin and lead. The word *terne* is from the French, and has two meanings, which, although different in a general way, indicate qualities and conditions possessed by this material. One meaning is "consisting of three"—in this case, iron, tin, and lead—and the other "tarnished" or "dull." In this country the article is commonly called roofing tin, and is in distinct contrast with the bright plates coated with pure tin. A tin roof, when laid with *terne* plates of the best grades and by good workmen, is light in weight, yet strong and durable, incombustible, impervious to water or moisture, and not affected by heat or cold. The best grade is roofing tin produced from soft steel, made especially for the purpose, and which is coated by the "M F" method. The American Tin Plate Company, which supplies a great portion of the roofing tin that is used in this country, recommend the "M F" brand of plates as highly serviceable for all conditions and localities, and besides the plate always induces advantageous insurance rates.

FLY SCREENS.

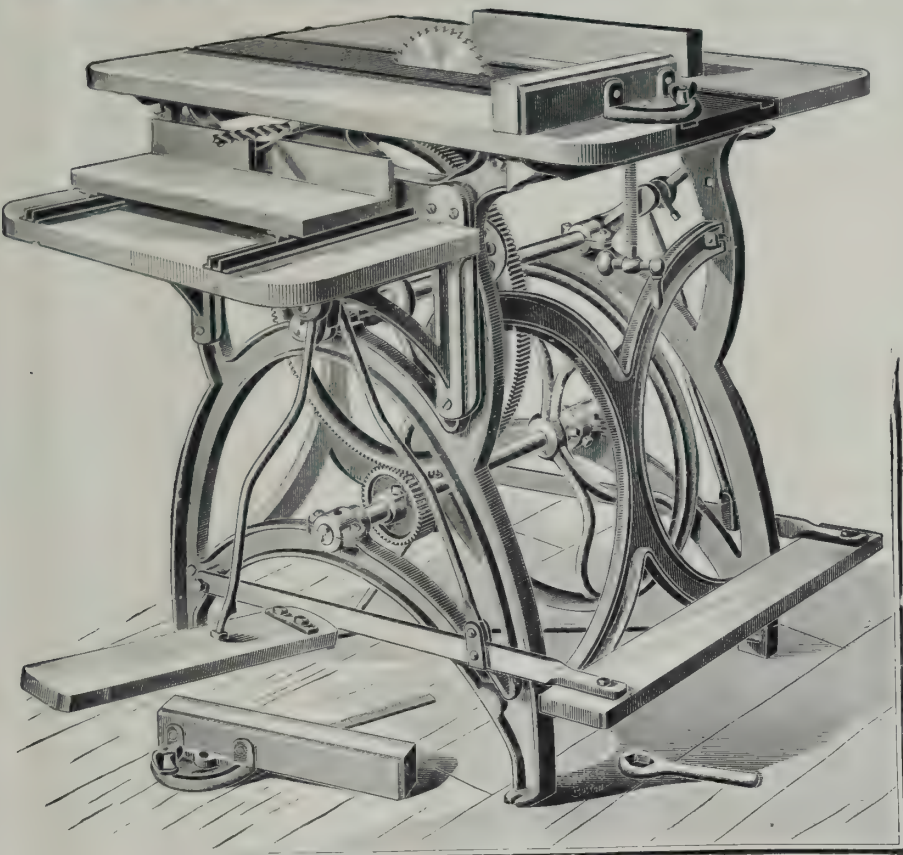
The fly screen season is now at hand, and residences hotels, hospitals, schools, etc., must protect themselves from the pestering insect. A catalogue issued by the A. J. Phillips Co., Fenton, Michigan, gives suggestions for measurements, and other information which will enable one to secure the protection promptly and accurately. The wire screens for doors and windows are made of the best materials. The netting, which is the vital part of the screen, is either black enameled, white metal finished, galvanized, or bronzed, heavy and extra heavy, and of standard mesh, which is fine enough to keep out intruders and coarse enough to let in the air. The screen doors and windows are made of Michigan white pine, light, strong, and not inclined to warp,



FINE MESH WINDOW-SCREEN.

twist or rot, and the finish used for the white pine is lead and oil paint, with sufficient varnish in the third coat to give an agreeable gloss. The firm also supplies hardware for sliding and stationary window-screens and screen doors, detachable spring hinges, loose pin butts, door pulls, porcelain knobs, catches, bolts, coiled wire springs, door latches with keys, bronze bolts for double doors and French windows, tacks, brads, screws, moldings, and window-screen frame-sticks. Wire cloth, which is woven 48 inches wide, is cut to dimensions. Many large hotels, rows of flats, institutions, great residences, and government buildings have been entirely fitted with screens and specialties by the Phillips Company.

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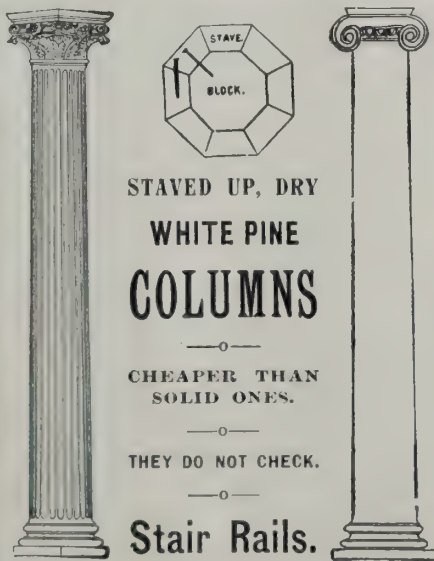
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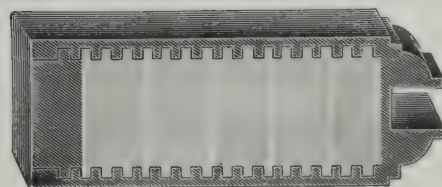
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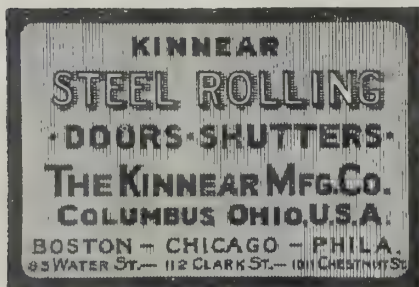
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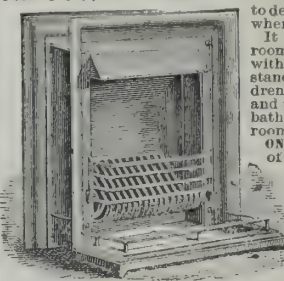


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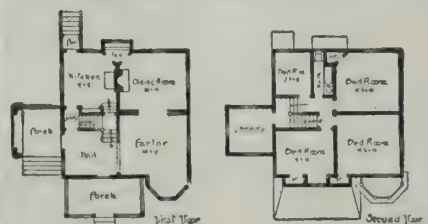
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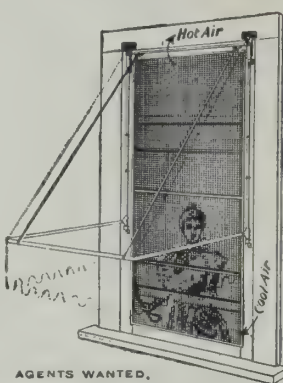
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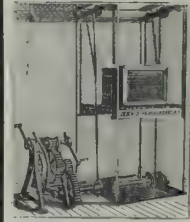
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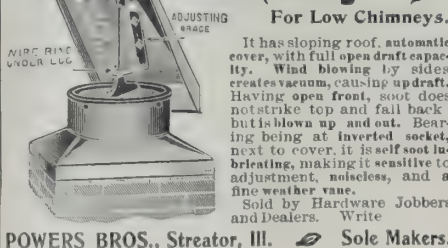
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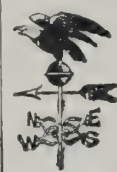
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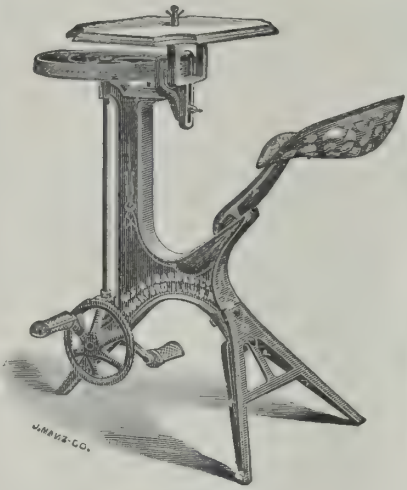
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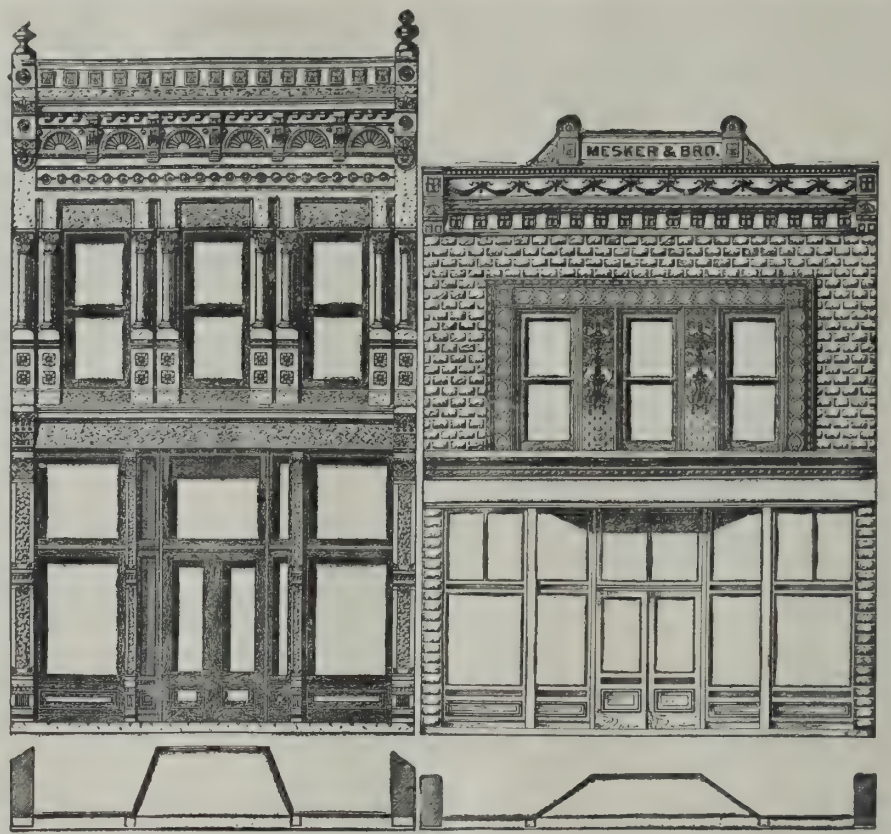
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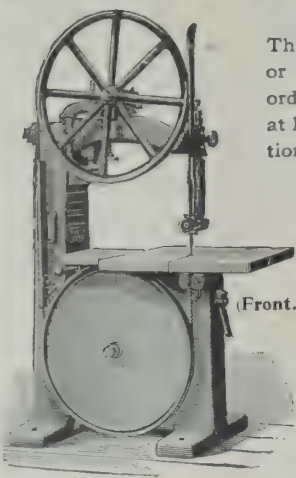
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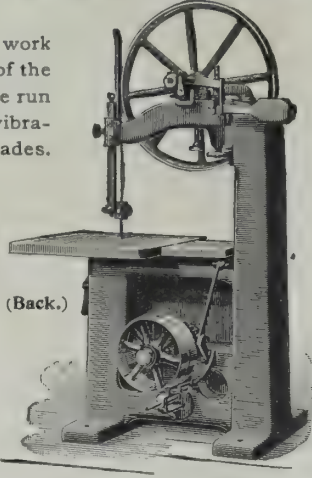
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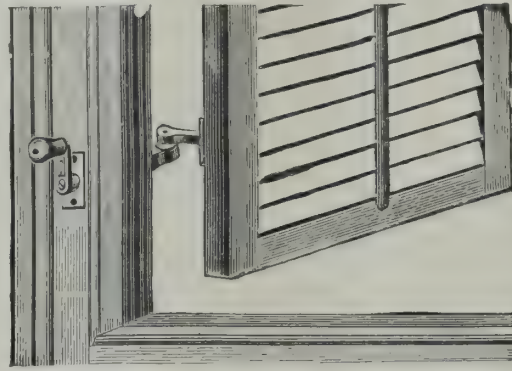


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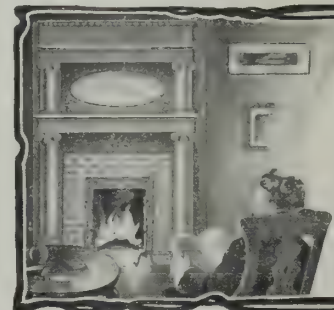
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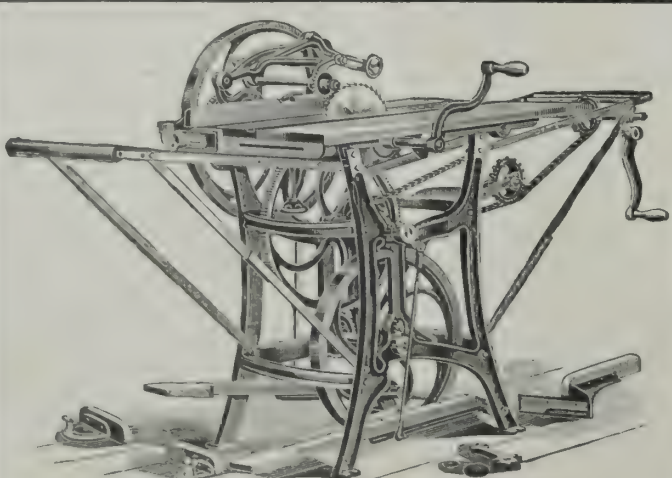
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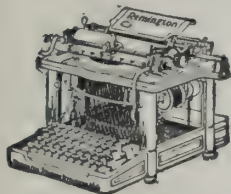
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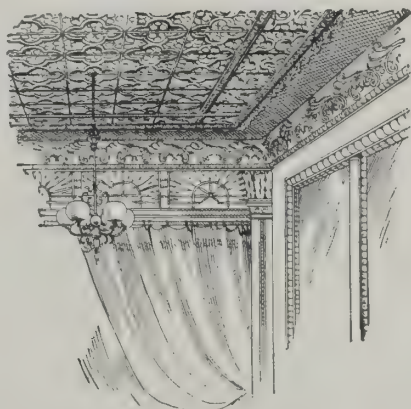
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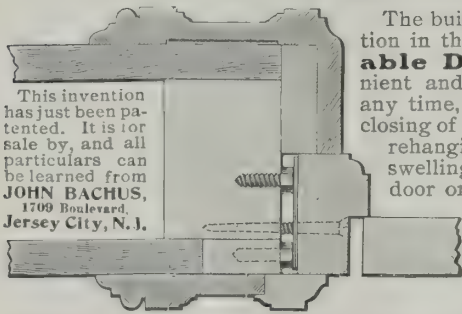
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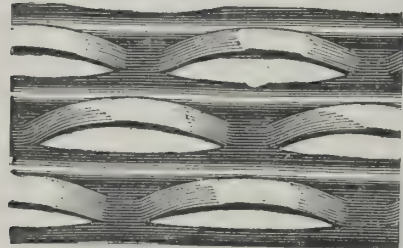
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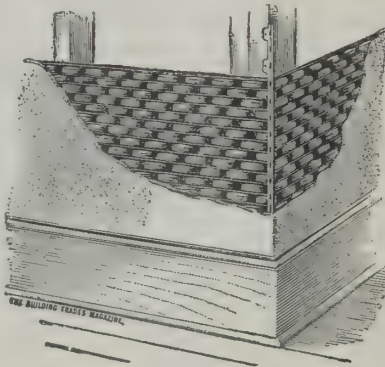
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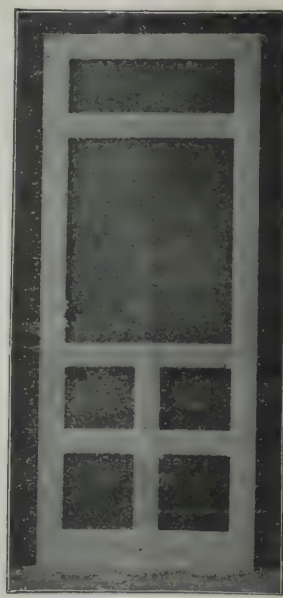
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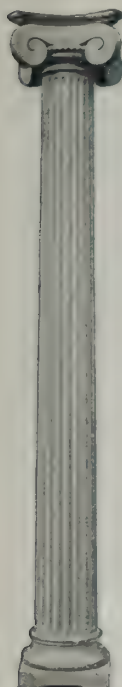
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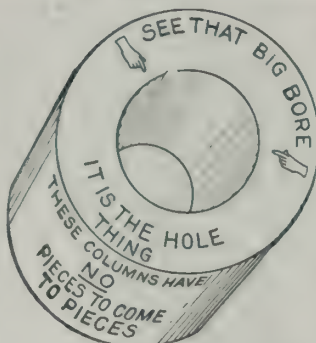
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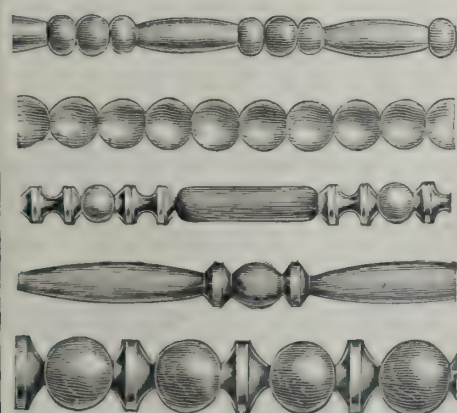
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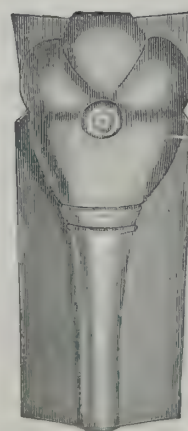
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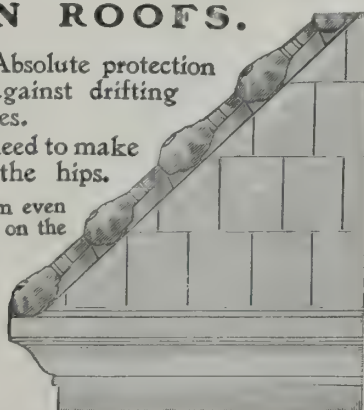
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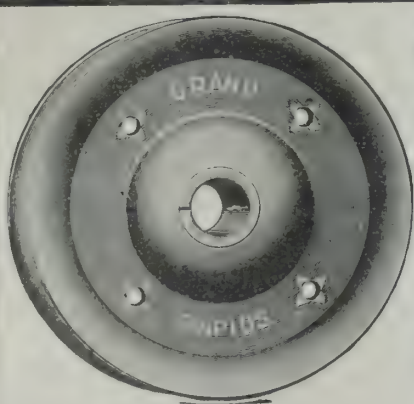
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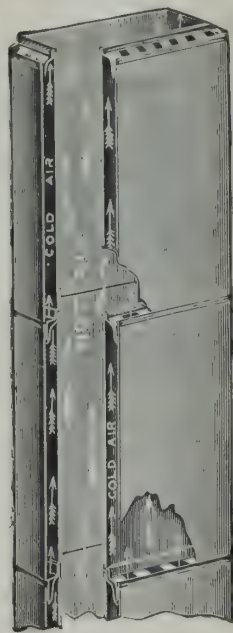
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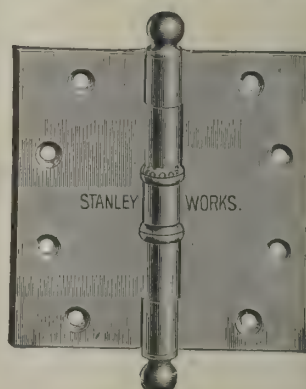
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MONTHLY COMMENT.

It is a singular comment on our national taste in architecture that the one national dwelling in the country, the White House, seems to need repairs and rejuvenation with each incoming administration. The necessity for the very considerable changes that have been made from time to time, and which now appear to be undertaken afresh, may be real enough; but their periodic frequency shows how very unsettled are any ideas on the subject of house decoration, and how strongly variant are the views of successive "First Ladies" as to the artistic merit of the surroundings amid which they are placed. It is not so very long ago that the White House was subjected to very considerable change and treatment by a well known firm of decorators, of men who, presumably, knew their business and thoroughly understood the art of interior decoration. Now, the daily press informs us, new changes are to be made by a firm of architects, and much of the work of the earlier men bids fair to be removed altogether. During the period represented by these changes an important group of interior decorators, or decorative architects as they sometimes call themselves, has grown up, who have maintained that, as men especially trained for such work, they are the proper people to do it. This contention, which certainly seems to have every element of right and reason to support it, does not appear to have borne much fruit when architects assume full direction of the interior changes in the White House. The question is not, of course, one of the merits of the two sets of men, but whether the profession of decorative architect is a true one and worthy of the support of art lovers.

The general overhauling of a notable residence like the White House brings out afresh the chief failing of contemporary architecture and decoration, and that

is, the lack of permanency in results. One hardly ever tires of old buildings or old work; one constantly wearies of new things and new ideas. Styles and forms that are in favor to-day are out of date and old-fashioned the day after to-morrow. Yet a house built a hundred years ago, or even forty or fifty, is always attractive and holds its own against the claims of the most aggressive new comer. The old building may have been built without special thought of form or decoration, its decorative side may, indeed, be most unimportant, but it still commands respect and often wins admiration. And the reason is not far to seek. The old work is genuine; the new is sham. The old is simple and direct; the new is aggressive, labored and strained; the old is unpretentious; the new is loud mouthed. The old is a careful study along simple lines; the new is elaborated to the straining point. In other words, the old work is the product of simplicity and the new the resultant of complexity. The old builders knew few things, but knew them well; the new builders know many things, and most of them badly. The old buildings are honest structures designed with thoughtful care; each new building is but a small item in the life of its busy designer, who values it for the commission it brings him, and who will never decline a job because he has too much to do.

The extension of the policy of home rule to our American cities must, in time, produce many interesting results. It is a movement that must broaden greatly in the next few years, because the protests against centralization are already rapidly growing. And, as a matter of fact, there is no reason why every city and town in a single State should be guided by identical rules. Human beings are very variable, and the conditions suitable for one may not be those under which the next man may best develop. An interesting example of individual development is furnished by the city of Quincy, in Massachusetts. For twenty years it has been without a saloon, and within that time it has more than doubled in population; its assessment valuation has increased threefold; its deposits in savings banks have increased fivefold; and it has now five times as many houses as twenty years ago. Meanwhile the population has increased 120 per cent., and the amount expended for the Poor Department has decreased 12 per cent. It is no wonder the anti-saloon people are pointing to Quincy as a veritable gem of cities, and one of the goodliest places in the country.

Another interesting phase of town development is furnished by Winnetka, in Illinois. The little town is only sixteen miles from Chicago, and yet though it may be unknown to most people, has achieved remarkable success under a distinct system of government. And the strange part of it is that the method is without establishment by law! It appears that forty years ago a proposal was made to give a private corporation a franchise for supplying illuminating gas. The authorities were persuaded by the townsfolk to submit the matter to the voters for an expression of opinion. The voice of the people was unmistakably and overwhelmingly against the proposal. Thereupon only men were nominated for trustees of the town who would agree to refer all important matters to the voters. The idea speedily developed into a custom, and has remained so ever since, to the vast satisfaction of the people and to the lasting improvement of the system of government. It is possible that, without establishment by law, such a system might not be applicable to large communities, but it shows what can be done when an intelligent body of voters can agree on a concerted action.

Trees, trees, and more trees is a crying need of the time. Trees are needed in the country and they are needed in the city; their wholesale destruction is one of the blots upon our culture; their replanting and cultivation is one of the absolutely necessary debts we need to pay to posterity. But, as a matter of fact, we need not look to posterity, for we are already suffering from the destruction of forests, and our towns need nothing so much as an abundance of shade trees, and plenty of them. Already some of our railroads have awakened to their value, and are lining their tracks with trees and encouraging their growth in every way possible. It is a move in the right direction,

KITCHEN ENDS AND BACK YARDS.

In the good old days people were fortunate if their houses presented a respectable front to the main street; what their backs were like was a matter of indifference. And not only did this follow in the case of private dwellings, but an historic and notable instance of the same neglect of the rear of a building is furnished by so well known a structure as the City Hall of New York, whose prudent builders supplied it with a rear of brown stone because, they thought, no one would ever possibly go so far up town as to

see that part of the building. Nowadays, as all the world knows, no one lives below the City Hall, although perhaps many who pass it may be unaware that the back of the building was given a painted coating to correspond in appearance with the front and sides only a few years ago. A better job in imitation marble has seldom been done.

We are fortunately moving away from that barbaric stage in which any part of the building is neglected. A building is a work of art—or should be such—and no part of its structure should be slighted. From an architectural standpoint, the rear of a building is as important as the front. A house is not a front wall, but a complete structure with at least four sides. It is true enough that when houses are built in rows the side walls disappear, and the back wall, often enough, is only visible from the back houses, and has no public significance. But good architecture requires that a building should be good in all its parts; and a building can not be good, admirable or logical if any portion of it is slighted and care lavished only on the most visible parts.

The semi-detached house and the completely detached house of the suburbs and the country call for even more emphatic comment. Here the whole of the house is visible, and if we must treat all visible parts artistically it is obvious that the backs of the country houses are as important as their fronts. There is, in fact, only one rule, and that the very obvious one of excellence in all things. The back of a house should not be neglected because of the proximity of the kitchen, for the kitchen is the only indispensable and most useful room in the entire dwelling. It should not be neglected because it is the part most frequented by the servants, because servants should never be encouraged in neglect; only too soon will they find ways of slighting their duties and parts to neglect without having such matters thrust upon their daily notice by their own especial surroundings. And it should not, above all, be neglected for the house's own sake; for a house can not be a true house unless it is harmonious and perfect in all its parts.

In the house that is well designed the kitchen end or rear becomes as important as the front or side of approach. If the house is large and the grounds that surround it are in proportion, this may be the garden front and the part most affected by the occupants. Then, of course, it is treated as a real façade and is actually the most important front of the house. But, in any event, it must be designed with care. No one should live in a house in which either the back or sides may be matters of apology.

The treatment of a kitchen end or rear is a matter that involves no problem of difficulty, and needs only to be guided by common sense and an appreciation of fitness and beauty. If the house is placed amid pleasant grounds the immediate surroundings of the rear should be as pleasant and as agreeable as any other part. A tasteful flower bed, a well-kept lawn, nicely trimmed paths, all these help the rear as well as they help the main front. No careful housekeeper would rest satisfied with a method that called for clean front windows and soiled rear ones. And so the obvious rule is clear: the back of the house is as important in its way as the front.

When houses are built in rows the solution is somewhat different, although the problem is the same: every part of the house must be equally pleasant. A row of city houses is, in effect, a wall, one side of which is visible and the other—the back of the house—is hidden. The design and material of each face may, therefore, differ widely; but the inner wall should always be sensible and suitable and void of all offense. It must, at all events, be effective as a setting for such attempts at gardening as may be possible in crowded city limits.

How far a back yard in a row of semi-detached dwellings may be common to the whole row is perhaps problematical. It is a matter that depends chiefly on the people living in the houses and the manners of their children. Fences and barriers are seldom beautiful, though often necessary and even valuable. Esthetically, of course, the ideal arrangement is without fences; but the practical objections that may arise from the lack of restrictions may, at times, overbalance the decorative value of a common lawn.

The illustrations on page 107 show two interesting instances of kitchen ends which will well repay study. That of the residence of Mr. Foss, at Cohasset, Mass., is a charming piece of a delightful country house. The view in Prospect Park South, Brooklyn, N. Y., is an intensely interesting photograph of a row of semi-detached houses, each with its own back yard separated by a hedge and with a spacious lawn without divisions beyond. This arrangement is as uncommon as it is beautiful, and shows very clearly the way in which the rears of suburban houses should be treated to obtain the best effects. It is interesting to note, also, that while the rears of these houses are unmistakably rears—as they ought to be—neither the design nor the material has been slighted.

TALKS WITH ARCHITECTS.

MR. GEORGE L. MORSE ON THE DURABILITY OF STEEL CONSTRUCTION.

No one needs to be reminded that the steel skeleton building is at once the most novel and most distinguishing structure of our time. Writing in 1865, Mr. James Fergusson, a well-known English historian of architecture, pointed out that the modern theater and opera house was the only really new and distinctive building invented in modern times. That may have been true at that date, but it has long since ceased to be the fact. Many new types of buildings, some of them genuine works of architecture, have come into existence since this statement was made. Modern life moves fast and is constantly requiring new buildings for its services. The steel skeleton building, which originated in high office building design, has been extended to lesser structures and has become an integral part of modern architectural practise.

But is it permanent? Are the millions of dollars that are annually put into these buildings permanent investments? Will they stand upright for an indefinite period? These are questions that have come before architects more than once since the type was

with which the architect who is called upon to erect a modern building is concerned. The question is not really that of erecting a building absolutely impervious, absolutely secure, absolutely permanent, but one that most nearly approaches imperviousness, security, and permanency.

"The methods of iron construction are well known to every one. The columns are set up at convenient or regular intervals. They are connected with beams and girders, the whole forming a framework or skeleton of an aspect now thoroughly familiar to every one in our large cities. But while it is no exaggeration to say that every one is familiar with the general appearance of such frameworks, it is not every one who understands what they mean, how they are used, what is their strength, and what may be their element of danger. No conscientious architect erects a building that he knows to be dangerous from the beginning; but it is equally true that no architect can guarantee the absolute stability and permanency of a steel frame building.

"The columns erected, the filling in of the walls begins. The column is then embedded within the brick or terra cotta wall or other enclosing material. Everything is closed up as tight as modern skill can sug-

"But is not steel generally used?" I queried.

"Unquestionably, and I am quite at a loss to account for this when cast iron for outside columns offers so many superior advantages in many cases where it can be used instead of steel. Cast iron is not so liable to corrosion as steel; it is not so readily affected by heat, and will resist the deteriorating effects of a conflagration to a much longer extent than steel, and it is less expensive. Here are three excellent reasons why it should be preferred in most cases to steel. And yet steel is used to a much greater extent. I presume that personal preference or familiarity with steel on the part of engineers may account for a good deal of this. Cast iron is not available for bridge or girder work, and engineers being accustomed to steel may have fallen into the way of using it without fully realizing that cast iron is better adapted for many purposes.

"Of course there are some circumstances and conditions in which cast iron can not be used. If one has a narrow, high building to erect, it will require to be braced in order to resist the wind pressure. In such a case the cast iron column is useless and steel columns must be used. Steel girders must also be employed, so that it is impossible to erect a building



VERANDA—COUNTRY SEAT, SAN MATEO, CAL.—See page 116.

developed, and they recur again and again, notwithstanding the extent to which these buildings are erected.

The views of Mr. George L. Morse on this important subject are entitled to unusual consideration. No architect has built so many large buildings in Brooklyn. His practise has included buildings of every type and kind, but for our present purposes it is not necessary to point out more than the four chief office buildings of that city—I beg pardon, I should have said borough—the Eagle Building, the Mechanics' Bank, the Franklin Trust Company Building, and Temple Bar, the last being the largest office building in Brooklyn, and one of the largest office buildings in the entire city of New York.

I found Mr. Morse immersed in a study of this problem; not only had his previous buildings given him wide experience, but some important new work gave a practical turn to his researches that rendered them peculiarly timely and valuable. He did not hesitate to express himself freely and forcibly on the subject.

"Modern construction," he said, "like the construction of all time, is liable to more or less deterioration. Brick is at once the most useful and the most absorbent of building materials. Terra cotta is but another form of brick. Concrete is made with water and is not impervious to it. These are the chief materials

gest, and the work carried on to completion. The method involves nothing unusual and nothing with which every architect is not entirely familiar. But the architect's work done, that of nature begins. Water and air are the two chief sources of danger to steel construction. And water will penetrate brick, not always with the same rapidity nor in the same degree, but it is an exceedingly porous and absorbent material, and if sufficient water is projected against a building it can not fail, in time, to reach the steel, and deterioration will set in.

"Cast iron is not so susceptible to moisture as steel. Cast iron is granular and does not readily corrode. Steel, on the contrary, is fibrous, and if corrosion once starts in it, it is progressive and continuous. The likelihood of danger from steel construction is, therefore, not dependable upon care in erection, but is inherent in the materials used."

"To quote a distinguished citizen," I interposed, "it is not a theory, but a condition that confronts us."

"Exactly so," returned Mr. Morse, "and a very serious condition. A case has recently been reported of a building in Chicago which has been taken down, and most astonishing deterioration detected. Personally I am not familiar with this case, and only speak of it by report, but it shows that the note of warning which General Sooy Smith struck a few months ago has been sounded none too soon."

with a metal framework that will wholly avoid the use of steel.

"There is thus an ever present danger which should be carefully taken into account whenever a metal construction building is erected. Paint is of little protection, for it will not wear indefinitely. Concrete I do not regard as much more effective than brick. Brick itself must be chosen with the greatest care and the porous varieties rigidly rejected for all exterior work. If one could build walls that are not exposed to heavy rains, the solution would be comparatively easy, for the likelihood of danger of corrosion would be comparatively slight.

"The chief safeguard we have at present in my estimation is the use of cast iron columns in exterior work wherever possible. Cast iron, as I have already indicated, can not be used in many instances, but wherever it can be used it should be employed. Certainly it is fair to ask that every sort of safeguard should be employed when steel is used. There are too many lax methods in current use.

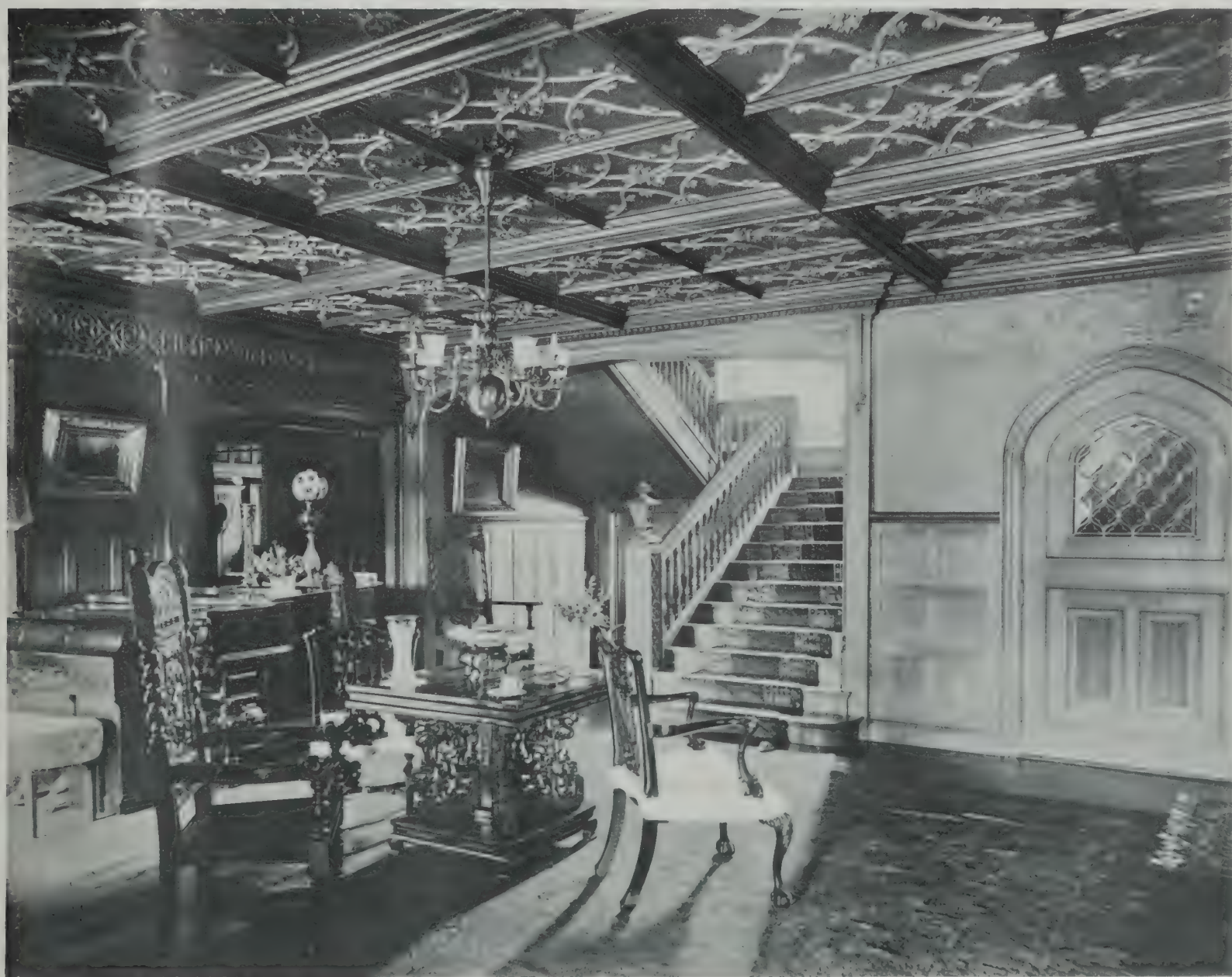
"The problems introduced by a possible or actual collapse are too great to be touched on at this time. My personal preference would be to take down the whole of the threatened wall. To repair or replace a faulty steel column would be a work of great cost and much difficulty. I hope the occasion will never arise. It is a contingency we may hope will never occur."

BARR FERREE.



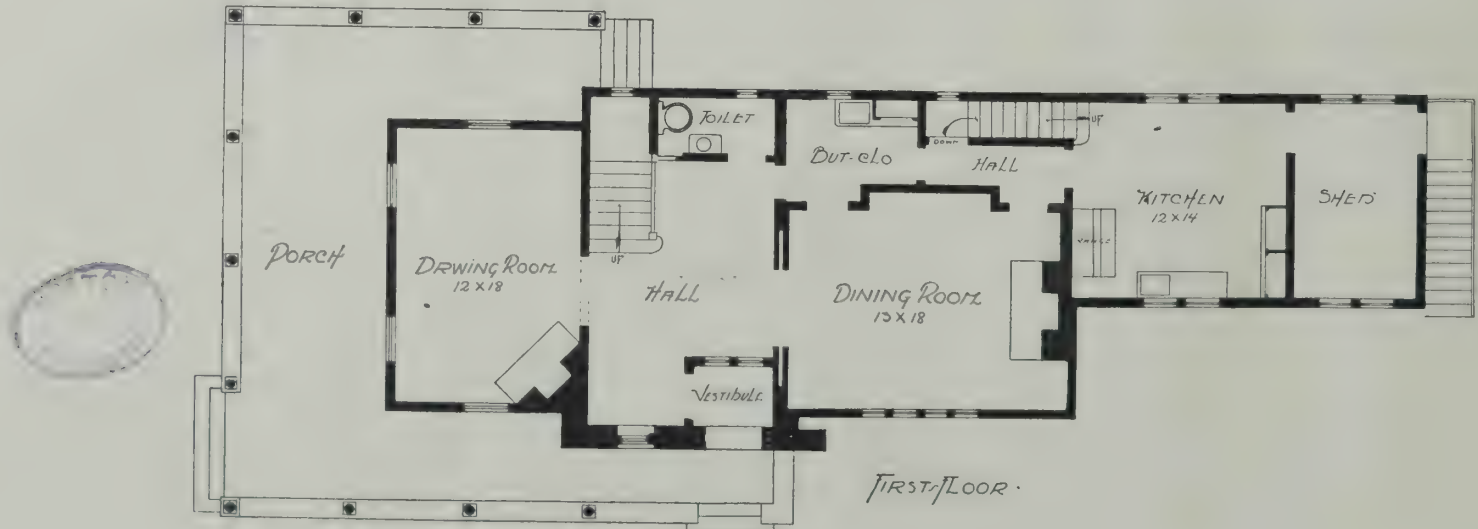
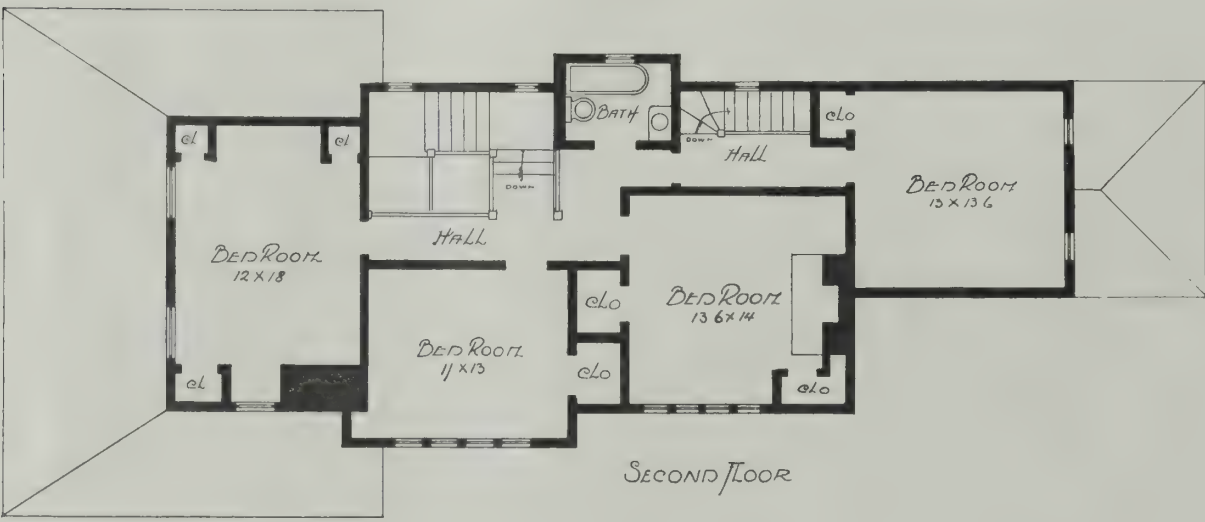
SECOND FLOOR PLAN

A RESIDENCE AT BROOKLINE, MASS.—See page 116.
MESSRS. CHAPMAN & FRAZER, ARCHITECTS.



A RESIDENCE AT BROOKLINE, MASS.—See page 116.

MESSRS. CHAPMAN & FRAZER, ARCHITECTS.



A MODERN DWELLING AT OGONTZ, PA.—See page 117.
MESSRS. DULL & COATES ARCHITECTS.



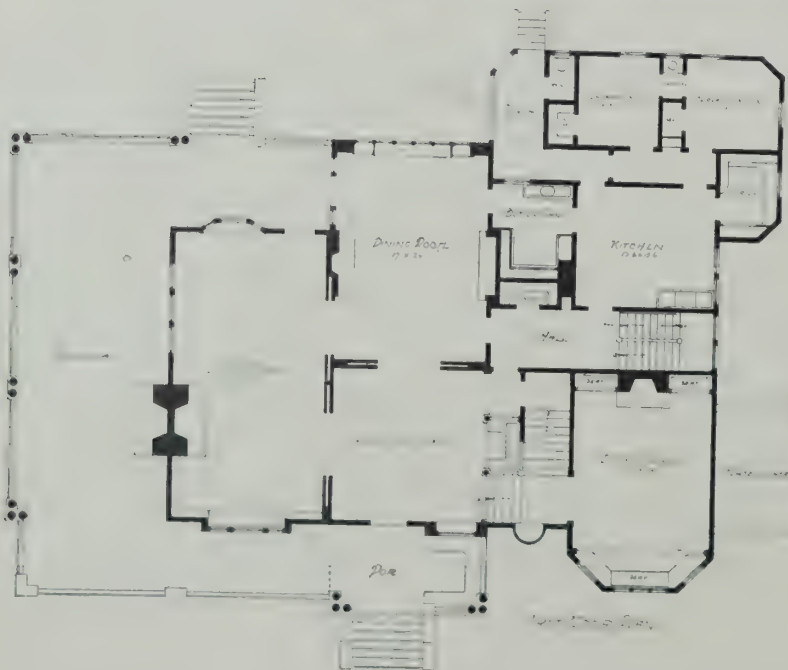
KITCHEN ENDS OF A GROUP OF HOUSES IN PROSPECT PARK SOUTH, BROOKLYN, N. Y.



KITCHEN END OF THE RESIDENCE OF MR. FOSS, COHASSET, MASS.—Mr. H. S. Fraser, Architect.

KITCHEN ENDS.—See pages 102 and 117,



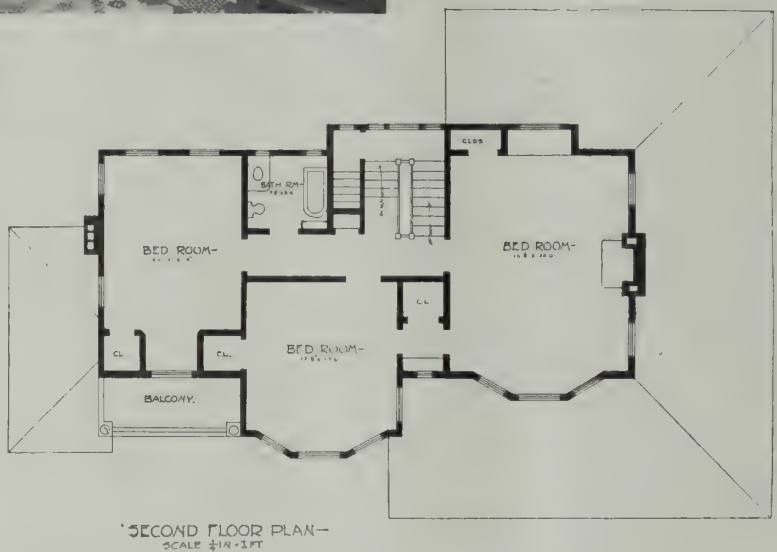
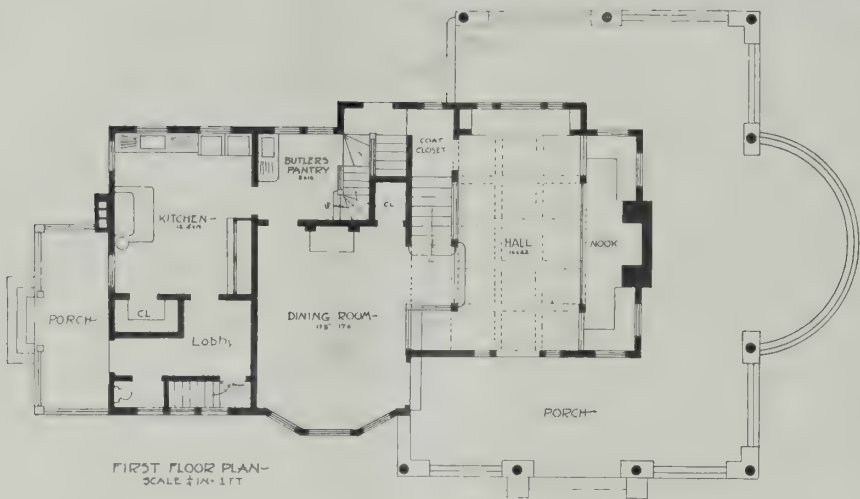


COUNTRY SEAT, SAN MATEO, CAL.—See page 116.



COUNTRY SEAT, SAN MATEO, CAL.—See page 116.





A RESIDENCE AT GLEN COVE, L. I.—See page 116.
MR. HOBART A. WALKER, ARCHITECT.



Staircase in the Residence of J. C. Schwab, Esq., at New Haven, Conn.
Mr. CLIPSTON STURGIS, Architect, Boston, Mass.



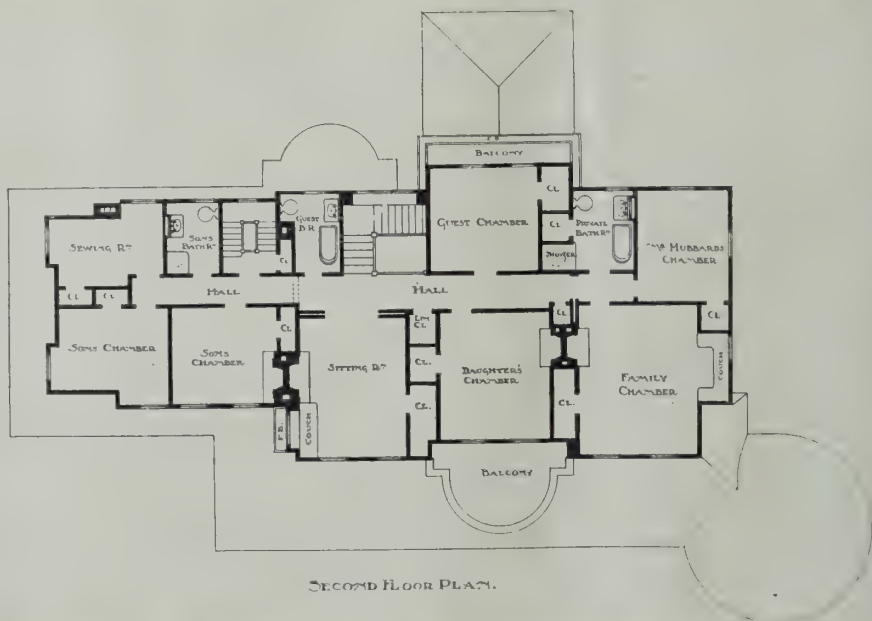
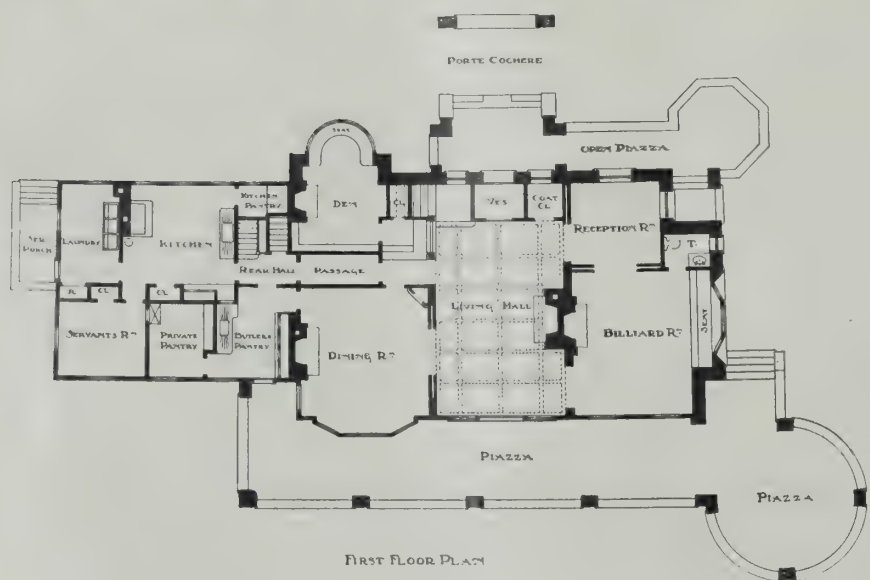
Staircase in the Residence of Arthur D. Stone, Esq., at Mount Vernon, N. Y.
Mr. HERBERT LUCAS, Architect, New York.



Staircase in the Residence of Louis F. Neuman, Architect, at Forest Park Heights, Springfield, Mass.



Staircase in the Residence of E. E. Allison, Esq., at Yonkers, N. Y.
Mr. G. G. LAURYENS, Architect, New York.



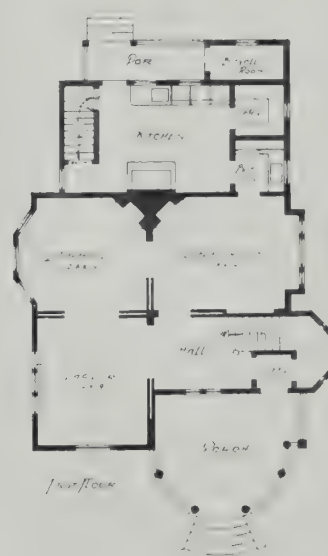
A RESIDENCE AT LARCHMONT, N. Y.—See page 116.

MR. FRANK A. MOORE, ARCHITECT.



A PAINTER'S HOME AT LEONIA, N. J.—See page 116.

MR. F. W. WEST, ARCHITECT.



DWELLING AT FLATBUSH, N. Y.—See page 116.

MR. JOHN J. PETIT, ARCHITECT.



SUMMER HOUSE AT SEA GATE, BROOKLYN, N. Y.—See page 116.

MESSRS. ROSSITER & WRIGHT, ARCHITECTS.



ENTRANCE PORCH TO THE RESIDENCE OF JOHN KENT, ESQ., CHESTNUT HILL, MASS.—Mr. H. S. Fraser, Architect.



REAR PORCH TO "ROSEMARY HALL," GREENWICH, CONN.—Mr. H. C. Pelton, Architect.

TWO PORCHES.—See page 117.

COUNTRY SEAT, SAN MATEO, CAL.

THE residence of Spencer E. Slade, Esq., located in San Mateo County, Cal., illustrated on pages 103, 108 and 109, occupies a site of ten acres covered with a magnificent forest of giant live oaks. The exterior is a combination of the clapboard and cedar shingles and cobble stone buttresses. The clapboards and other trimmings are of California redwood, natural finish, the shingles being allowed to weather naturally. The feature of the exterior is a spacious veranda having an "L" leading to the dining-room and living-room entrances, also a terrace connecting with the front veranda. A unique feature of this veranda is an immense open fireplace in which a camp fire is built, which lends a very beautiful effect during the evening. The reception hall is finished in Eastern quarter sawed oak, having beamed and paneled ceilings. The feature of this hall is the grand stairway leading to the second floor, off the first landing of which is located the billiard room. This room is finished in California Sissons white pine, and the feature of the room is the fireplace, the cozy nooks at each side and the bay window nooks at the opposite end of the room. The dining-room is also finished in quarter sawed oak and has a beautiful side-board and mantel, as well as an attractive feature in the china case extending across the end of the room under and at each side of the windows. The living-room is finished in West Coast mahogany, having bookcase, seats, etc. A decided feature is the large brick fireplace and mantel having a mahogany shelf supported on terra cotta modillions, in which is formed the grotesque figure of an owl; at the top of the mantel is the face of an owl, whose bill is holding the picture cord. The remainder of the first floor is occupied by the kitchen, buttresses, pantry and servants' room, etc., and an inside hall leading to a porte cochere. On the second floor are located the bedrooms, bathroom, etc. Each room is finished in different wood, ranging from curly redwood to mahogany. In the attic are a number of servants' rooms, sewing-room, storeroom, etc. The cost of the residence was \$20,000, exclusive of the large barn and other outbuildings.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT GLEN COVE, L. I.

THE country residence illustrated on page 110 has been built for J. Russell Clarke, at Glen Cove, Long Island. Primarily a country house, it can be heated and made comfortable for winter use. The building is covered with shingles throughout, and is stained a silvery gray color, with white trimmings. The roof is shingled also, and is stained a mossy green. Dimensions: Front, 50 ft.; side, 27 ft., exclusive of piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 9 ft.; third, 8 ft. The main hall, which has a ten-foot ceiling, is a large, spacious and cool room, having nine windows of various forms in three sizes, most of which are glazed with leaded glass. The woodwork is of quartered oak, with black Flemish finish. The fireplace is a large one built of red brick, with a hearth and facings of the same, and with broad seats at each side. The walls are covered with turkey red burlap, and the spaces between the ceiling beams are tinted in harmony. The staircase opens into hall and is finished in a similar manner. The dining-room, being a smaller room, is on a higher level and has a nine-foot ceiling, and is trimmed with whitewood, treated with ivory white enamel. The walls and ceilings are tinted a delicate green. The fireplace is fitted up complete. The butler's pantry is provided with sink, drawers, dressers, etc. The kitchen is conveniently located, and is provided with sink, washtrays, dressers, pot closet, and a large entry of sufficient size to admit ice-box, etc. The second floor is trimmed with whitewood, and is painted an ivory white, and contains three bedrooms and a bathroom fitted up with porcelain fixtures and exposed nickelplated plumbing. There are two bedrooms, besides a servants' bathroom, on third floor. The cemented cellar contains a furnace-room, coal and wood bins. Mr. Hobart A. Walker, architect, 31 Nassau Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT LARCHMONT, N. Y.

THE residence of Mr. Walter C. Hubbard, at Larchmont, N. Y., is illustrated on page 112. The natural faced field stone of the locality where the house is situated is largely used for the first story, piazza, underpinnings and chimneys. The gables and part of the second story are treated as half timber work, the cement work being painted a very light hellotrope color, and the timber and cornice work being painted a cream white, with the blinds a decided green color. The remainder of the building is covered with Oregon red cedar shingles, and has been given a coat of

bleaching oil, which softens the red color of shingles and gives a pleasing contrast with half timber and stone work. Dimensions: Front, 60 ft.; side, 40 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft. 6 in.; second, 9 ft.; third, 8 ft. 6 in. The interior arrangement of the house is excellent. The plan shows a large living hall extending through the center of the house, with the dining-room, reception-room and billiard-room opening off the hall through wide sliding doors. The finish of this hall is in white enamel, with mahogany mantel and doors. The staircase is of mahogany with white balusters, three to the tread. The billiard-room is wainscoted in dark, finished oak, and is made attractive by an inviting window seat and generous mantel treatment. The dining-room is treated in a handsome manner with mahogany trim, etc. The reception-room is treated with old ivory white. A room on this floor, which is well arranged, is Mr. Hubbard's den, placed two steps down and below the level of the main floor. It is fitted with bookcases, fireplace, and a semicircular bay with leaded glass sash. The kitchen and its dependencies are most complete. The second story is treated in white enamel, with private bathrooms, tiled and supplied with shower baths as well, and ordinary tubs. A feature of this floor is the upstairs sitting-room situated on the water side, and provided with a balcony overlooking the same. Two guest-rooms, two bathrooms, and four servants' rooms, besides a large cedar closet and a trunkroom, are on the third floor. A cemented cellar contains the heating apparatus and all necessary conveniences. Mr. Frank A. Moore, architect, Windsor Arcade, Fifth Avenue and Forty-seventh Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

DWELLING AT FLATBUSH, N. Y.

THE modern dwelling illustrated on page 113 has been erected for the T. B. Ackerson Construction Co. at Flatbush, N. Y. The underpinning is built of rock-faced stone. The superstructure is of wood, and the exterior is covered with sheathing, paper, and clapboards on the first story and shingles on the second story. The clapboards are painted Colonial yellow and the shingles a dark brown color, while the trimmings are painted ivory white. The roof is covered with shingles and left to weather finish. Dimensions: Front, 35 ft.; side, 43 ft., not including porch. Height of ceiling: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The hall is trimmed with curly birch, and has a paneled wainscoting and ceiling beams. There is an ornamental staircase with broad landings. The parlor is trimmed with white pine and is treated with white enamel. The library is trimmed with mahogany and contains an open fireplace fitted up with tiled trimmings and a mantel. The dining-room has a similar fireplace. It is trimmed with quartered oak, and is provided with a paneled wainscoting and ceiling beams. The kitchen and pantries are trimmed with whitewood, and are fitted up complete. The second story is trimmed with whitewood and finished natural. This floor contains five bedrooms, large closets, and a bathroom, the latter being furnished with Mott's porcelain fixtures and exposed nickelplated plumbing. There are three rooms and a trunkroom on the third floor. A cemented cellar contains a furnace, laundry, and other dependencies. Mr. John J. Petit, architect, 186 Remsen Street, Brooklyn, N. Y.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A PAINTER'S HOME AT LEONIA, N. J.

AN artist's house, which has been completed for Frederick W. West, Esq., at Leonia, N. J., is shown on page 113. The design is treated in a quaint manner with stucco work and a gambrel roof effect. The foundation is of stone. The remaining part of the building from grade line is constructed of wood, with the exterior framework covered with sheathing and then metal lath. This metal lath is coated with one coat of pure Portland cement and sand, and then two coats of the same mixed with a little lime. The whole is tinted a soft gray and is very effective. The roof is covered with shingles and finished natural. Dimensions: Front, 32 ft.; side, 28 ft., exclusive of porches. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in. The interior treatment is very simple. It is trimmed with cypress throughout. The woodwork in the living-hall and dining-room is treated with a forest-green effect. The living-hall contains an ornamental stairway with turned newel-posts, balusters, and rail. The dining-room contains an open fireplace with Roman brick hearth and facings, and a neat wooden mantel. The woodwork in the kitchen and pantries and servants' room is finished natural. The kitchen is furnished with sink, wash-trays, servants' watercloset, etc. The pantry, of good dimensions, is well fitted up with shelves, drawers and cupboards.

The second floor contains the studio, two bedrooms, and a bathroom. The studio is well lighted and ventilated, and on the north end has a cluster of four windows rising into the peak of the gable. The two bedrooms are provided with well fitted-up closets. The bathroom is furnished with all the modern conveniences. There is a cemented cellar containing a furnace, made by the Union Stove Co., coal and wood bins. Cost, \$2,600 complete. Mr. F. W. West, architect, Leonia, N. J.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

SUMMER HOUSE AT SEA GATE, BROOKLYN, N. Y.

THE "summer house" illustrated on page 114 was built for the Sea Gate Improvement Co., at Sea Gate, Brooklyn, N. Y. The building is constructed on brick piers. The superstructure is of wood, and the exterior framework is covered with sheathing, paper, and then shingles. This shingle work is left to finish a natural weather finish, while the trimmings are painted a cream white and the blinds a bottle-green. Dimensions: Front, 40 ft. 10 in.; side, 30 ft. 10 in., not including piazza and the rear porch extension. Height of ceilings: First story, 8 ft. 8 in.; second, 8 ft. 2 in.; third, 8 ft. 2 in. The living and reception-rooms occupy the entire front of the house. Both are trimmed with pine and are treated with ivory white. They are separated, one from the other, by square columns with Ionic capitals, rising from the floor to the ceiling. The living-room is provided with several paneled seats, and an open fireplace built of red brick, with the hearth and the facings of the same; the mantel shelf is supported on ornamental iron brackets, with a paneled overmantel above the shelf. The doors are stained and finished in cherry. The stairway is recessed in an alcove, and has treads, risers, and balusters treated in ivory white, and a newel-post and rail in cherry. The dining-room is treated in a similar manner. The butler's pantry is well fitted-up with bowl, dresser, closets, drawers, etc. The kitchen is provided with a sink, range, wash-trays, store pantries, and ice-box, and also a yard which is inclosed. The second floor contains five bedrooms, five closets, linen closet, and bathroom, the latter being wainscoted with imitation tile, and furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains three large bedrooms and ample room for storage. Messrs. Rossiter & Wright, architects, 94 Liberty Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT BROOKLINE, MASS.

THE illustrations shown on the cover and on pages 104 and 105 are those of a residence erected for John G. Wright, Esq., at Brookline, Mass. The building is designed in the Elizabethan style of architecture. It is built of buff brick laid in mortar of a harmonious color, while the trimmings are of dressed Indiana limestone. The roof is covered with slate. The most important characteristic of the exterior is the terrace at the rear. Dimensions: Front, 98 ft. 2 in.; side, 63 ft. 2 in., exclusive of terrace. Height of ceilings: Cellar, 8 ft.; first story, 11 ft.; second, 10 ft.; third, 9 ft. The vestibule has a tiled floor, a paneled wainscoting of oak and a beamed ceiling. The hall is trimmed with quartered oak, and has a paneled wainscoting and a beamed and ribbed ceiling. The staircase has a massive carved newel, balusters, and rail. The first flight of steps rises to a broad landing, which is provided with a paneled seat. The fireplace is built of dressed Indiana limestone. The reception-room is treated in the Louis XV. style, and is most attractive with its open fireplace and mantel. The library is trimmed with white pine and is treated with old ivory white. There is an open fireplace built of Roman brick, with facings and a hearth of the same, and a Colonial mantel. This room is treated with pilaster effect, and is provided with a wooden cornice. Bookcases are built in, and also bay windows, with paneled seats. The dining-room is trimmed with quartered oak, and is provided with a paneled wainscoting and a wooden cornice. The open fireplace is built of Roman buff brick, with the facings and a hearth of the same, and a mantel handsomely carved and provided with an overmantel and a mirror. The conservatory, which is separated from the dining-room by folding glass doors, is an attractive feature. The billiard-room is trimmed with mahogany and has a paneled wainscoting, ceiling beams, and a quaint nook provided with paneled seats and a fireplace. The kitchen, pantries, and servants' dining-hall are furnished with all the best modern conveniences. There are four bedrooms, two bathrooms, and ample closet room on the second floor, besides three servants' bedrooms and bathroom. The third floor contains four bedrooms, and a bathroom, and also two trunk rooms. The cellar, which has a cemented bottom, is provided

with heating apparatus, etc. Messrs. Chapman & Frazer, architects, 84 Exchange Place, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A MODERN DWELLING AT OGONTZ, PA.

THE modern dwelling which we present on page 106 has been completed for Mr. W. T. B. Roberts at Ogontz, Pa. The underpinning and part of the first story are built of local stone with the faces left rough as they came from the quarry. The remainder of the building is constructed of wood, and the exterior frame-work is covered with matched sheathing, paper, and shingles. This shingle work is left to weather finish, and the trimmings are painted white. The roof is also covered with shingles and is treated in a similar manner. Dimensions: Front, 23 ft.; side, 66 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. 6 in. The vestibule has a paneled wall and ceiling, and a floor laid with Dutch tiling. The main hall is trimmed with quartered oak, and has a paneled wainscoting, ceiling beams, and an ornamental staircase with turned newel posts and balusters. This staircase is lighted effectively by delicately tinted leaded glass windows. The lavatory beneath the stairway is conveniently located, and is fitted complete. The drawing-room is trimmed with white pine and is treated with white enamel, the walls being treated with Colonial wall paper. The fireplace is furnished with a hearth and facings of unglazed tiling, and a mantel of Colonial design. The dining-room is trimmed with oak, and is provided with an ornamental wood cornice and a plate rack. The fireplace has green tile trimmings and an oak mantel. The butler's pantry is fitted with bowl, drawers, dressers, icebox, and stairway complete. The kitchen is furnished with a Novelty range, sink, dresser, and store shed. The cellar, cemented, contains a laundry fitted with Alberene wash trays, an Ideal Novelty furnace, and coal bins. There are four bedrooms, ample closets, and bathroom on the second floor. The bedrooms are treated in delicate tints with wall coverings in harmony. The bathroom has a tiled floor and wainscoting of white glazed English tiling, and is provided with porcelain fixtures with nickel-plated open plumbing attachments. The attic contains ample storage room. Messrs. Dull & Coates, architects, 1126 Walnut Street, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A PAGE OF STAIRWAYS.

THE illustrations on page 111 are stairways in the residence of J. C. Schwab, Esq., New Haven, Conn., Mr. Clipston Sturgis, architect, Boston; in the residence of Arthur D. Stone, Esq., Mount Vernon, N. Y., Mr. Herbert Lucas, architect, New York; in the residence of Louis F. Neuman, Esq., architect, Forest Park Heights, Springfield, Mass.; and in the residence of E. E. Allison, Esq., at Yonkers, N. Y., Mr. G. G. Lauryens, architect, New York. These are all interesting pieces of stairway decoration, and are helpful in showing various methods of stairway design.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

TWO PORCHES.

THE illustrations of porches on page 115 are interesting types of front and rear treatment. One illustration shows the entrance porch to the residence of John Kent, Esq., Chestnut Hill, Mass., Mr. H. S. Fraser, architect, Boston. The other view is the rear porch to Rosemary Hall, Greenwich, Conn., Mr. H. C. Pelton, architect, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

KITCHEN ENDS.

THE general treatment of kitchen ends and rear treatment is discussed at length elsewhere in this number. The illustrations on page 107 reproduce two interesting rear views. The single house is the kitchen end of the residence of Mr. Foss, at Cohasset, Mass., designed by Mr. H. S. Fraser, architect, Boston, Mass.; the group of houses are in Prospect Park South, Brooklyn, N. Y.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

YEW ARCHES AT ALTON TOWERS.

The illustration on page 101 is an exceptionally fine photograph of the yew arches at Alton Towers, a representative and delightful English garden of the first rank.

The plate is produced, by permission, from the English weekly newspaper Country Life.



THIS is the season of the country house. It may not surround us on all sides, but it is with us very amply. The summer house and its joys are sung by many voices; papers and magazines are filled with it and its properties, and, more important than all, every one who has a summer house in the country is occupying it. Perhaps no form of architecture gives greater joy or is as useful as the country house.

COUNTRY life has reached the pages of the big magazines. It has obviously become a matter of solemn chronicalization and learned comment. Apparently it is a theme worthy of fine minds, and now that it is being solemnly written about a flood of illumination may be expected. Harper's Magazine for April contains an extremely flippant essay on the subject, accompanied with some uncommonly beautiful illustrations. It is one of the economies of magazine publication that the papers are generally written first and illustrated afterward. This procedure, which has much to commend it in a literary way, was undoubtedly not followed in the present instance; for the illustrations do not, in any sense, illustrate the text. They are fine. The words are neither worthy of the publication that gives them publicity nor of the theme. Here are some gems in words from it: "To a citizen who has attained to the honorable distinction of being a grandparent a country house is a most enviable luxury. . . . Grandparents ought to have money laid up, time to spare, and places in the country where their grandchildren can come at any time. . . . But, of course, grandparents, to be satisfactory and thoroughly useful in their vocation, must be of the right sort." And so on.

The Century calmly places itself at the head of country improvements by a simple announcement to that effect in its advertising pages. This interesting statement, which can not be passed unchallenged, is supported by a paper on "The Beautifying of Village and Town," by Mr. Sylvester Baxter, which contains a good deal of wholesome advice. "In all work of civic improvement," writes Mr. Baxter, "it is of the utmost importance that the attainment of what is truly beautiful should be constantly held in view. It is not sufficient to shape things according to what we ourselves may deem beautiful. Personal standards are apt to differ greatly in such things. There are probably few persons of good taste who have not at some time admired some things which they later found very ugly. But there are certain standards of beauty that are commonly agreed upon by persons of recognized good taste. The best thing, therefore, is to ascertain what these standards are, and then to conform to them. It would be difficult to say just what constitutes absolute beauty; but it appears to be derived from certain relations and proportions between elements of form, line, mass, color, etc.—the mode of their disposition meaning the difference between harmonious and discordant effect, as in music."

The same author points out the general value of cleanliness as an elemental proposition in all movements toward civic beauty, and, in general, takes the same view of the value of present energies and their possible coordination that was touched on in our own pages two months ago. The value of organization, and especially the help of women, is further insisted on as a help toward all public improvements.

These excerpts show some strange notions on the attractiveness of country life in the minds of metropolitan editors. A striking contrast is afforded by the contents of the new monthly, Country Life in America, whose editor is a professional agriculturist and lives in a college town. A recent number of his paper contained articles on the following subjects, presumably selected with a view of setting forth the attractiveness of country existence: "Hunting Rattlesnakes with a Camera;" "The Cloudlands," a study in photographing the clouds; "The Gray Fox," who is pleasantly described as "the daring freebooter of New England;" "The New Hunting," in which the remarkable statement is made that "man is an animal;" "A Pigeon Ranch in California;" and several pages of practical directions on agriculture and horiculture in the country. All of these things are well enough in their way, and the lusciousness of the illustrations with which these papers are embellished adds much to their attractiveness; but how do they help on the cause of country life, and in what way do they help one to form a better notion of its attractions?



ARCHITECTS.—SCHEDULE OF CHARGES.—An owner, who is not apprised of a schedule of charges obtaining among architects, and had no knowledge of the same, is not to be held bound by such schedule. Sully et al. vs. Pratt, 31 So. Rep. (La.) 161.

CERTIFICATES OF ARCHITECT.—Where a building contract provided for a certificate by the architects, on failure of a contractor, authorizing the owner to terminate the contract, a certificate given by one claiming to be the overseer and contractor for the architects was insufficient for that purpose, where there was no evidence that he occupied such position or was authorized to act for them in such a manner. Spencer vs. Duplan Silk Co., 112 Fed. Rep. (U. S.) 638.

COMPENSATION OF ARCHITECT.—The fact that an owner who had engaged an architect to design a building and prepare plans and specifications afterward changes his mind, and does not erect the building, and that he has benefited nothing by what the architect did, while entitled to some weight in fixing the amount of compensation to be paid the architect, can not, in the absence of an agreement to that effect, defeat the architect's recovery. Sully et al. vs. Pratt, 31 So. Rep. (La.) 161.

CUSTOM AS TO SUBCONTRACTS.—Where a contractor stated to a material man that this was the first time he had made a subcontract, and did not know what the custom was as to making payments, in an action by such material man to recover for the materials furnished to such contractor it was not error to exclude evidence as to the custom of making payments on contracts of such character, the contract clearly not being made with reference thereto. McDonough vs. Evans Marble Co., 112 Fed. Rep. (U. S.) 634.

DISSENT FROM ARCHITECT'S ESTIMATE.—Where a building contract provided that the value of any alteration should be decided by the architect, and that, if either party dissented from his decision, the matter should be referred to arbitrators, but did not specify any time at which the dissent must be made, the builder did not waive his right to dissent because he did not do so at the time the architect's computations were submitted to him with the order for the alterations. Brown's Ex'rs vs. Farnandis et al., 67 Pac. Rep. (Wash.) 574.

FORFEITURE OF CONTRACT.—Where a building contract provided that, if the architects should certify that a failure of the contractor was sufficient ground for such action, the owner should be at liberty to terminate the contract, such certificate should be made only on the knowledge of the architects; and a certificate reciting that it is based on information received from the owner's agent is insufficient to justify a forfeiture. Spencer vs. Duplan Silk Co., 112 Fed. Rep. (U. S.) 638.

HUSBAND AS AGENT OF WIFE.—A lien against house conveyed to defendant by M. can not be sustained; it not appearing that the conveyance was in fulfillment of the agreement of M. to convey to H., husband of defendant, one of seventeen houses, for work thereon, and the work, though contracted for by M. before the conveyance, not having been done till after the conveyance, and plaintiff having then consented to do it only on the direction of H., and his agreement to pay therefor; there being no evidence that H. was agent of his wife, or that she knew plaintiff was doing the work, and no implication of agency or assent being raised by the fact that H. was her husband. Lippmann vs. Low et al., 74 N. Y. Supp. 516.

MATERIALS CONTRACTED FOR OUTSIDE OF STATE.—Where materials are furnished to be used, and in fact are used, in the construction of a particular building in New Mexico, the party so furnishing such material is entitled to the benefit of the lien laws of New Mexico, although said material was sold and delivered in another State. Genest et al. vs. Las Vegas Masonic Bldg. Ass'n et al., 67 Pac. Rep. (N. M.) 743.

PART PERFORMANCE.—Where a contractor for materials to be used in a building furnishes a large portion of them, which are accepted and used, he may recover the value of such materials, less the damages sustained by reason of his failure to perform the entire contract. McDonough vs. Evans Marble Co., 112 Fed. Rep. (U. S.) 634.

The Household

SOME very sensible remarks on the industrial aspects of housekeeping are contributed to the New York Evening Post. Housekeeping, the writer remarks, is not an industry in the economic sense, and any attempt to apply the methods of labor unions to it would be disastrous in many ways. The real trouble between servants and masters, it is contended, is not because of any inherent difficulty in a servant's duties, but arises from a false conception of American social standards. Is it not time, says the writer, to be sincere and call things by their right names? Is it not time to say, "All people are not equal. Ignorance is not equal to culture. Boorishness is not equal to refinement. Incapacity is not equal to capacity. Social station is not made by protesting one has it, and happiness can only be found by modestly accepting the reality of social grades. To be a genuinely good servant is much better than to be a sham lady"? The elemental common sense of these propositions is commended to masters and servants alike.

A "housekeeper's delight" is described in a recent magazine. It is a linen closet, housekeeper's pantry and trunk room in one. It is about eight feet square, with one high glass transom admitting light and air from a large south window in the butler's pantry. A high broad shelf all around the room is the resting place for blankets and pillows and boxes of all sorts, while underneath on two sides is a double row of hooks for articles hangable. On the other side a cupboard is built for all the bedroom linen. A convenient little jog makes a place for all sorts of stores, with big shelves for jugs of precious liquids and small shelves for jellies and jams. There is a special shelf with double-locked doors of its own for silver and valuables, and the entire cupboard can be closed with the housekeeper's key. It is lighted with electric light and is a veritable emergency closet for all sorts of uses.

A trade journal offers the following receipt for a compound which will clean carpets: Make a suds with a good white soap and hot water, and add fuller's earth to this until the consistency of thin cream. Have plenty of clean drying-cloths, a small scrubbing brush, a large sponge, and a pail of fresh water. Put some of the cleaning mixture in a bowl and dip the brush in it; brush a small piece of the carpet with this; then wash with the sponge and cold water. Dry as much as possible with the sponge, and finally rub with dry cloths. Continue this until certain that all the carpet is clean; then let it dry.

To properly clean floors requires as much art as any other good thing well done necessitates. Some hints on this important subject are borrowed from the Tribune: After the rug and carpets have been taken up a floor that is not finished in any other way should be thoroughly scrubbed and dried before it is covered again. It is economy to lay down floors of matched boards of good, seasoned wood, which will not warp and show the cracks. After the carpet is up and the dust has been thoroughly swept up and has settled, scrub the wood with warm water and sal soda, cleaning and scrubbing about a square yard of surface at a time. It pays to have two pails, one of soda and water to scrub the floor with and one of soda and water to rinse it up with. Use two cloths, one to wipe up the floor and the other to dry with. When the floor is scrubbed wash and dry these cloths before you use them for another cleaning. If the floor is hard wood it had better be dressed by a regular finisher.

To build a successful log fire requires more skill and care than is apt to be given to it. A woman who has had marked success in this work makes the following suggestions: Shake out a double sheet of newspaper, and crush it rather tightly, leaving the edges loose that it may ignite easily. The back log should be of the greatest size that the fireplace will hold and may be of green wood, as this is the slowest to burn out, and the draught and fire are strongest in the back. The log should be shoved tightly against the wall. If it is a split log the inside of it should be turned toward the front. Three logs is a good number to start a fire with; the back log, a smaller one in front of it and the third on top of these two. All the ashes from the first three or four fires should be left on the hearth, as this makes a fine bed for keeping the embers hot, after they have fallen through the andirons. The woods should be mixed in order to have an ideal fire—green wood with dry, and the harder varieties—oak, cedar, pine, with the wood of the old fruit trees that have died. Apple gives a very mellow, soft light.

New Books

AMERICAN GARDENS. Edited by Guy Lowell. Boston: Bates & Guild Co. 1902. Price, \$7.50.

The demands upon the art of the architect in this age of progress are constantly becoming more exacting, and the knowledge he is expected to possess is by no means confined to the house alone, involving as it does the knowledge of construction, engineering, decoration, and frequently a knowledge of house furnishing; but it even extends beyond the walls of the mansion itself, where it may find a wider field in transforming the natural environment of the mansion into a condition which will be in harmony with the architecture of the house itself. In laying out a country place of the better class, the immediate surroundings of the house, the approaches thereto, the driveways, the gardens immediately adjoining the house, all form part of one general scheme in which the architect or the landscape architect must play an important part.

In first glancing over the pages of the "American Gardens," it is hard to realize that many of the gardens shown are really views taken on this side of the Atlantic. In some of the gardens shown the *mise en scène* is so purely Italian in character that it is difficult to conceive how such plans could have been so successfully carried out under the somewhat severe exactions of our northern climate. With the aid of formal gardens decorated with statuary, fountains, sun dials, and vases brought from Italy, the effect produced is truly wonderful.

As an evidence of the extent to which the work of the architect and the work of the landscape artist have converged, the names of the following appear as being the authors of some of the designs shown in this work: Olmsted, Olmsted & Eliot; Keen & Mead, Carrère & Hastings, Wilson Eyre, Jr.; McKim, Mead & White; Nathan Barrett, Chas. A. Platt, A. J. Manning, Bradford L. Gilbert, Daniel W. Langton, Little & Browne, etc., etc.

Among the gardens shown we recognize some which have already appeared in our columns. To enumerate all the beautiful gardens published in this work would be out of the question. Among the most elaborate are those of Woodlea, Scarborough, N. Y.; Mr. Stanford White's residence at St. James, L. I.; Auldwood, Seabright, N. J.; Fairacres, Jenkintown, Pa.; Bellefontaine, the residence of Mr. Giraud Foster, Lenox, Mass.; Glen Elsinore, Pomfret, Conn.; Drumthwacket, residence of Mr. M. Taylor Pyne, Princeton, N. J.; Indian Harbor, residence of Mr. E. C. Benedict, at Greenwich, Conn.; Faulkner Farm, Brookline, Mass.; Constitution Hill, residence of Mr. J. S. Morgan, Princeton, N. J.; several residences in Bernardsville, N. J., and last, but by no means of least interest, are reproductions of the beautiful old-fashioned garden that was at one time the object of the tender care and interest of the first President of the United States, at Mount Vernon.

This work is very beautifully prepared and the illustrations compare favorably with the high-class work of our English contemporary, "Gardens Old and New." In addition to the photographs the appendix at the end of the volume contains diagrams showing the designs of many of the gardens illustrated.

STEAM AND HOT-WATER FITTERS' TEXT-BOOK. Prepared for the Steam and Hot-Water Course at the New York Trade School, with Supplementary Chapters on House Heating, Specifications, and Surface Estimating. By Thos. E. McNeill. Illustrated. New York: David Williams Company. Third Thousand. Pp. 140.

This is a useful little handbook, whose scope is well expressed on its title page. The whole subject of steam and hot-water heating is covered in a simple way, and, while primarily addressed to young students, it will be found of advantage to those in other lines of trade who may wish to take up steam and hot-water heating. A small text-book such as this has long been needed, and it is a welcome addition to technical literature.

KITCHEN BOILER CONNECTIONS. Fifth edition, enlarged. New York: David Williams Company. 1899.

This valuable book is a selection of practical letters and articles relating to water backs and range boilers, compiled from the Metal Worker. Its practical utility is attested by the fact that the first edition was published in 1894 and the fifth in 1899. It summarizes a vast mass of practical experience and information. It is a book for the practical worker rather than for those whose kitchen experiences come from the use of that apartment. It admirably summarizes the special subject to which it is devoted.

The Garden

ENGLISH FORMAL GARDENS.

Among the early royal gardens, that of the Palace of Woodstock, where Henry III. carried out many improvements for his Queen, was the most prominent; and others, of course, existed at Windsor, Westminster, Charing, and the Tower. With the gradual erection of manor houses and country mansions, garden-planning naturally became more general, and as the abolition of the restricting lines of the old moat became possible, a greater scope for the play of fancy in garden design was afforded. Mounts and raised grass terraces, knotted beds and artificial gardens soon became in vogue, and records of these at Hampton Court and Nonsuch, near Ewell, Surrey, still exist, giving a good idea of the gardening done in the days of Henry VIII. Fountains and ponds were introduced in Elizabeth's time, and the designer of the houses then erected usually was employed to plan the gardens with which they were surrounded. The Stuarts encouraged gardening, and even Oliver Cromwell gave a pension of £100 a year to a man named Hartlib as a reward for the help he had given to the advancement of horticulture.

During the civil wars, however, many of the ornamental gardens which were the pride of their owners were wrecked, or converted into vegetable grounds, or sold, as at Nonsuch and Wimbledon. The rage for avenue planting was at one time very extensive, as in Northamptonshire. The Dutch garden was introduced by William and Mary's accession; but most of the topiary extravagances of Dutch gardens and of other work then done gave place to the productions of "Capability" Brown, Humphry Repton, and landscapists of that school. These were followed by London and Wise, Stephen Switzer and Bridgeman, the author of the "Gentle disorder" type of the natural-esque. Batty Langley says, "Nor is there anything more ridiculous and forbidding than a garden which is regular." During the latter half of the eighteenth century this was no doubt, remarks Building News, the general opinion. William Kent laid out gardens at Esher, Claremont, and those at Carlton House for the Prince of Wales, on the new style of plan, which aimed at realizing the compositions of landscape painters. He planted dead trees in Kensington Gardens "to give the greater idea of truth to the scene."

AMERICAN GARDEN MAKING.

THE Woman's Auxiliary of the American Park and Outdoor Art Association have issued a pamphlet for circulation at the International Exposition of Decorative Art now in progress in Turin, Italy, which concisely summarizes what an American garden is, and gives some brief rules on how to make one.

The artist gardeners of America, both men and women, it is remarked, consider that a foreground is as essential to landscape pictures made with growing plants as it is to landscape paintings, and that the appropriate material for this foreground is an open lawn. The fundamental rule of our landscape design is the open center flanked by massed planting at the sides. A good lawn—the best turf that can be secured—is accounted the first requisite of success. It must form the foreground of the home grounds when seen from without and the foreground of the border planting or other attractive scenes when viewed from within the dwelling.

To secure these results our best planters leave the front of home, school and other grounds comparatively open and mass the plantations of trees, shrubs and plants at the back and sides of the enclosure as a background and framework for the building and its immediate environment. The dwelling or other building is made the central and dominating feature of the picture. Subsidiary planting (which is artfully made to seem included in the structural planting already described) is then added. This takes the form of shrubs grouped to screen the drying grounds, the out-houses and other necessary but unattractive features of home life; vines set to climb upon the buildings themselves, or on trellises placed against or near them; masses of shrubs to fill in the angles or round out the corners of architectural features; and perhaps a few well-chosen, carefully-placed specimen plants or small groups near the entrances or elsewhere, as good taste dictates, but never dotted about over the open lawn to break up the concrete effect of the picture as a whole. This is in direct contrast to the usual European practise of overcrowding small grounds.

The effect of such treatment is to set apart each domain, whether it is large or small, as a picture complete in itself.

New Building Patents

THE following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY by MUNN & Co., Solicitors of American and Foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

BRICK. P. Griffin, Orange, N. J. April 15..... 697,914
TILE. B. P. Leslie, Brooklyn, N. Y. April 22..... 698,031
ARTIFICIAL BUILDING STONE. J. C. McClenahan, Coldwater, Mich. April 29..... 698,727

CONSTRUCTION.

TELESCOPING WICKET FOR COUNTER GUARD WALLS. R. B. Browne, Brooklyn, N. Y. April 1..... 696,546
CONCRETE ARCH CONSTRUCTION. W. C. Parmley, Cleveland, Ohio. April 1..... 696,838
PORTABLE HOUSE. C. P. Mott, Milford, Pa. April 8..... 696,996
SKYLIGHT. A. N. Staples, St. Paul, Minn. April 8..... 697,220
COLUMN STEP. T. J. Younglove, Richmond, Va. April 8..... 697,310
STEP STRUCTURE. H. W. Beardsley, Buffalo, N. Y. April 15..... 697,434
PORTABLE SCAFFOLD. E. Chartrand, Chicago, Ill. April 15..... 697,447
CORNER POST, TRANSOM BAR OR MULLION. J. Goldsmith, Columbus, Ohio. April 15..... 697,714
HOLLOW OR DOUBLE WALLED STRUCTURE. A. de Clairmont, Topeka, Kans. April 29..... 698,452
FLOORING FOR BUILDINGS. O. W. Norcross, Worcester, Mass. April 29..... 698,542, 698,543
CONSTRUCTION OF STRUCTURES SUSTAINING CROSS STRAINS. M. Weires, Allison, Iowa. April 29..... 698,605

CARPENTRY.

WINDOW. J. Fryer, Buxton, England. April 1..... 696,428
REVOLVING WINDOW SASH. C. D. Tabor, Newark, N. J. April 1..... 696,516
WINDOW SASH. P. Barnum, San Francisco, Cal. April 22..... 698,168
FRAME FOR DOORS, WINDOWS, ETC. J. B. d'Homergue, Pittsburg, Pa. April 22..... 698,201
DOUBLE DOOR. O. Francke, Freiburg, Germany. April 22..... 698,380
SELF-CLOSING WINDOW. E. Van Noorden, Boston, Mass. April 29..... 698,589
WEATHER STRIP. H. E. Kenny, Detroit, Mich. April 29..... 698,712
ADJUSTABLE FORM FOR STAIR BUILDERS. C. A. Ambrosios, East Orange, N. J. April 29..... 699,057

ELEVATORS.

ELEVATOR. C. W. Baldwin, Yonkers, N. Y. April 1..... 696,706
SAFETY ATTACHMENT FOR ELEVATORS. G. Donnelly, Diamond, Ind. April 1..... 696,726
SELF-CLOSING ELEVATOR GATE. G. E. Anderson, Philadelphia, Pa. April 22..... 698,385
ELEVATOR. A. B. Roney, Chicago, Ill. April 29..... 698,738
CONTROLLER FOR ELEVATORS. F. K. Fassett, St. Louis, Mo. April 29..... 698,827
ELEVATOR. J. Rice, Chicago, Ill. April 29..... 698,857

FIREPROOFING, FIRE-EXTINGUISHMENT.

FIRE ESCAPE. H. Boettcher, Hawereek, Tex. April 8..... 696,331
FIRE EXTINGUISHING DEVICE. W. Doll, San Francisco, Cal. April 15..... 697,611
FIRE EXTINGUISHING COMPOUND. J. B. Miller, Richmond, Ind. April 15..... 697,641
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MODE OF AND MEANS FOR VENTILATING AND FLUSHING HOUSE DRAINS OR OTHER DRAINS AND SEWERS. Shone & Ault, London, England. April 8..... 697,369
WATER CLOSET. J. Campbell, Denver, Col. April 15..... 697,803
FAUCET. J. C. Poetz, Spokane, Wash. April 15..... 697,881
STOPPER DEVICE FOR STATIONARY WASH BASINS. H. B. Collins, Denver, Col. April 22..... 698,375

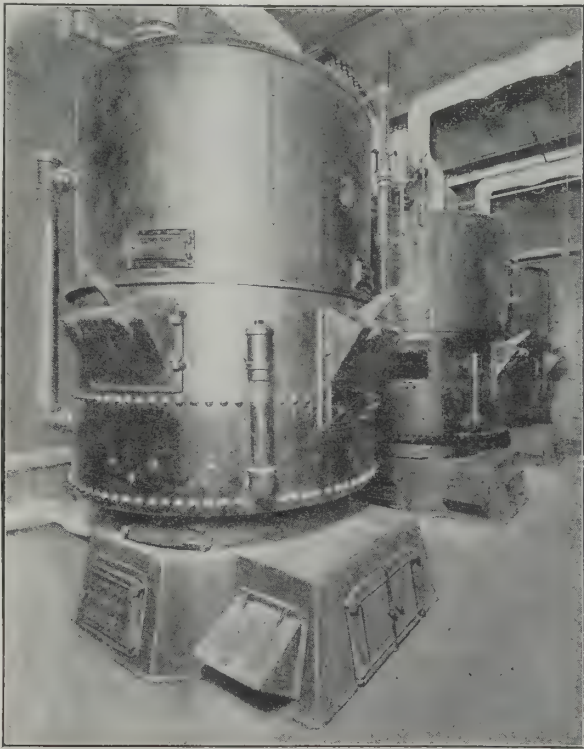
TOOLS.

PLANE. G. P. Davidson, Port Chester, N. Y. April 1..... 696,414

Publishers' Department

HEATING APPARATUS IN THE YALE CLUB BUILDING.

IN suggesting a satisfactory equipment for hotels, club houses and restaurants, where steam is desirable in connection with the usual heating of premises, we describe the plant in the Yale Club Building, 30-32 West Forty-fourth Street, New York city. Aside from the excellent results that have been obtained since its installation, the equipment is of interest from the fact that steam is furnished to cook with in the club kitchen, as well as to heat the large eleven story building, the temperature of which has been maintained at 70 degrees, even during the severest winter weather. The boiler-room is situated below the sidewalk, and is furnished with a battery of three Gorton side-feed steam boilers of the latest pattern—one of No. 36 and two of No. 38. The building is heated by the two-pipe system, and the two No. 38 boilers have been found more than sufficient. The steam will circulate at under three pounds pressure, and only on the coldest nights has it been necessary to carry more than this. The boilers supply steam for 168 radiators and 18 coils, ag-



A BATTERY OF THREE GORTON SIDE-FEED BOILERS.

gregating 5,470 square feet of radiating surface distributed throughout the structure, including the basement and the roof. Two tanks, holding together ten thousand gallons of water, used for various purposes, are kept from freezing by steam from the heating boilers, which is supplied to coils suspended along one side of the room under the roof in which the tanks are located. The kitchen on the top floor is furnished with steam for the cooking kettles from the No. 36 boiler, carrying about forty pounds, licensed for seventy-five pounds, and tested up to one hundred and twenty-five pounds water pressure. Steam is also given by this boiler to the pantry for warming dishes, making coffee, etc., and keeping soups and other foods warm. The engineer in charge of the plant reports the side-feed boilers as exceptionally economical and rapid steamers. On the coldest days there is no difficulty in getting steam up to forty pounds in seventeen minutes, and it has been necessary to coal up only twice in twenty-four hours. The Gorton boilers are easily managed and require little attention, and the engineer for these reasons has been enabled to care for the entire electrical plant and other power equipment of the building, as well as the plumbing and other duties. Gorton & Lidgerwood, the manufacturers of these feed-boilers, are at 96 Liberty Street, New York city.

RECORDING METERS.

RECORDING instruments for electrical installations are invaluable to an engineer who must keep accurate records of what is done in his plant. The use of the volt, ampere and watt meters is a complete check upon the attention of station men. They detect irregularities which might otherwise escape notice, clearly indicate all variations in the drop of the circuits at different periods of the day, reduce lamp renewals, etc. They are to the dynamo room what the steam gauge is to the engine-room, and pay for themselves by inducing careful regulation, which results in the highest efficiency and economy. No station is complete without the equipment. The Bristol Company at

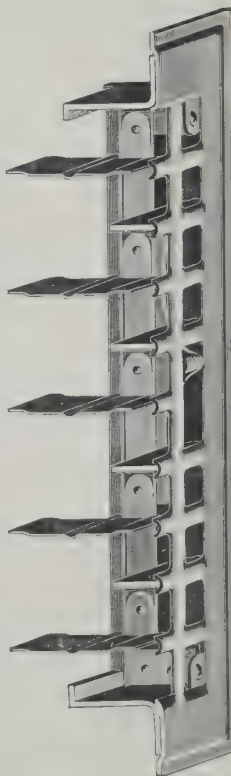
Waterbury, Conn., are the makers of fine standard recording meters that perform the services mentioned above, in direct and alternating current work. All meters are finished in polished nickel plate and fully guaranteed. The volt meter makes continuous records day and night, shows at a glance whether the voltages have been properly maintained and regulated, and is a very important factor in the regulation of all kinds of electric service. It is constructed on the electric balance principle without permanent magnets. The ampere meter, in its continuous records, shows exact time of day, length of time and quantity of current used in electric light, railway, power and storage battery plants, and is also applicable to telephone, telegraph and electric fire alarm systems. The ampere meter has been perfected so as to avoid magnetic lag and the effect of the inertia when the current is thrown off and on. The standard watt meter records continuously in ink on a revolving chart, the watts of a direct or alternating current circuit, and is especially applicable for recording the electrical power of transmission lines, and where it is desired to keep account of the total power of an electric current. It is adapted to all ranges of volts and amperes, and entirely avoids the use of permanent magnets. The company make all styles of meters for special ranges, and of black oxidized copper or copper electro plate instead of nickel if ordered. Carrying cases for Bristol's recording instruments—a single compartment case for a recorder only, and a double one for a recorder and resistance box—are neatly finished and provided with leveling screws, leather handle, and lock and key.

MANTELS AND FIREPLACES.

To all who contemplate building, the catalogue of W. G. Ostendorf, Philadelphia, Pa., should be interesting, as it shows a complete line of goods in mantels and fireplaces. Half-tone cuts show the goods as they appear on the floor and as clearly as in a visit to the establishment. In order to have the work show up to the best advantage, and save expensive or unskilled labor in erecting, the firm has devised a process of mounting tiles on slate, making it so simple that any one of ordinary intelligence can place a mantel in position. It has been used with entire success, even in large cities, and no one should hesitate about ordering mantels at a distance for fear of not getting the best effects. The firm is prepared to furnish tiles for floors and walls of baths, kitchens, vestibules, etc., slate laundry tubs and grates, and all its goods are shipped directly from the factory.

HOT AIR REGISTERS.

REGISTERS made wholly from wrought metal are much stronger than those of cast iron, and are practically unbreakable. The steel wrought article averages over 40 per cent. lighter in weight, which makes a considerable saving in the item of freight. The register boxes, being of a shallow depth, require much less stock room, and in most cases they will take the place of convex face registers for side wall use. Wrought steel registers are made by The Hart & Cooley Co., of New Britain, Conn., and each one is packed in a strawboard box, and then cased in a convenient size for easy handling. They are finished to match standard hardware trims, as well as the standard register finishes. The border frames are provided with lugs at each corner for centering in the floor, and these lugs may easily be hammered flat if desired, thus obviating the necessity of carrying in stock the flat as well as the ribbed frames. Tin box loop holes are provided in the borders in the same location, in each size, as in the standard makes of cast iron. The register boxes are also furnished with tin box loop holes for use in fastening to side walls. The registers in border frames are of the standard size and interchangeable with standard makes of cast iron. Face plates of wrought brass are furnished at a moderate advance over steel, and they make a register that will retain its finish and always look well; those of the antique brass finish are very attractive in appearance.



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A new design for a grand piano, by an English artist, shows an oblong case, instead of the harp form in general use. It is an interesting innovation, and the novelty of the design is heightened by richly colored woods in natural colors and stained.

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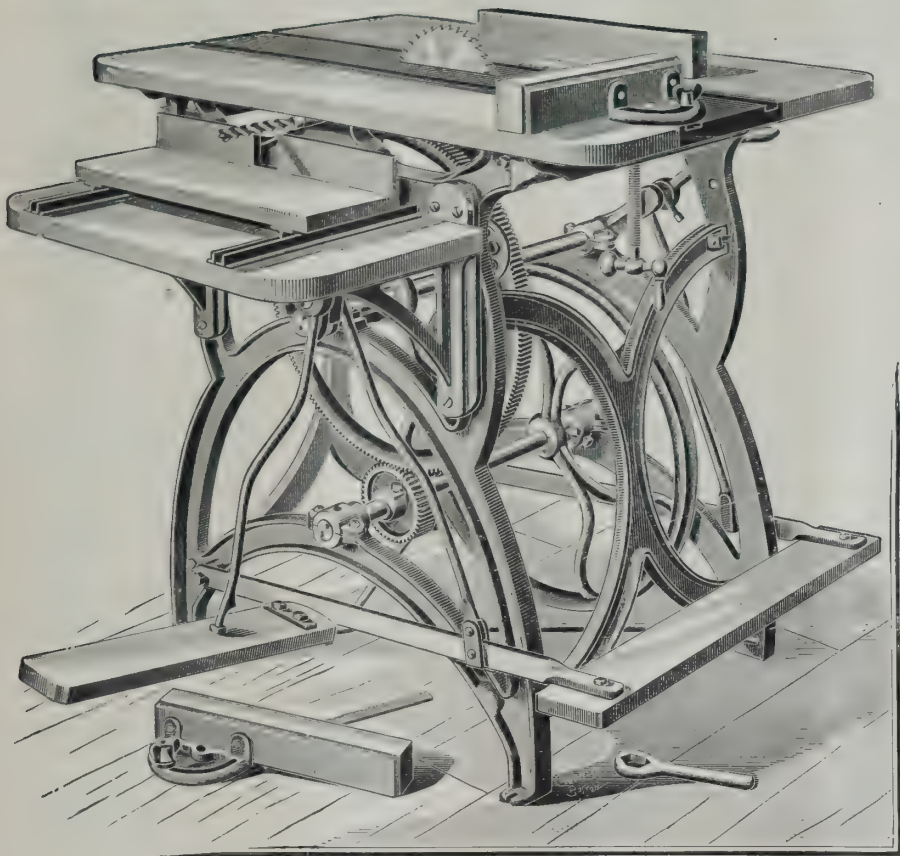
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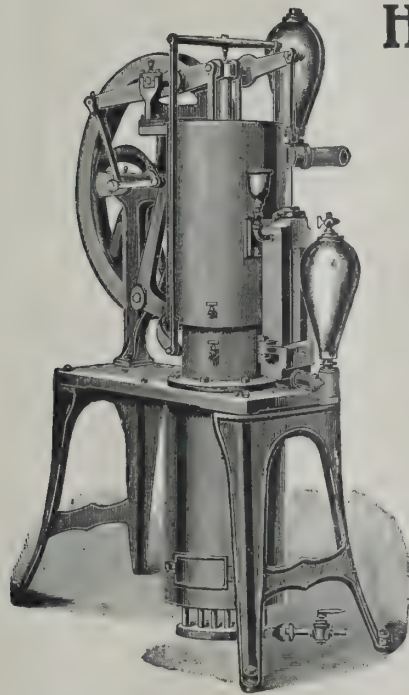
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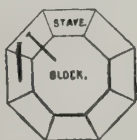
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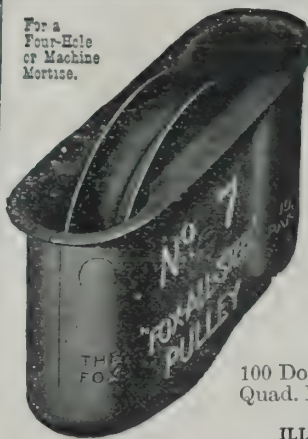
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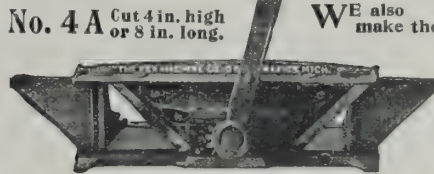
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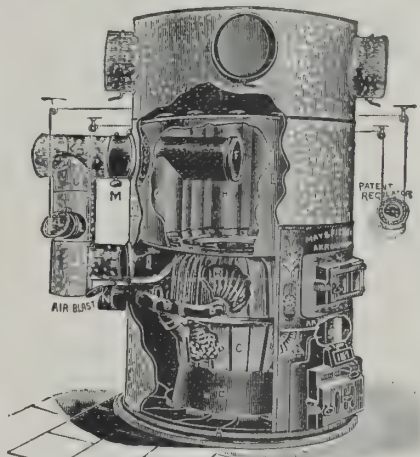
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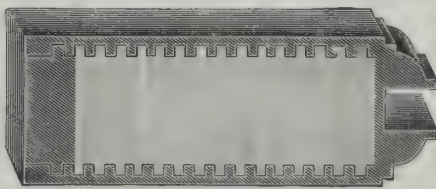
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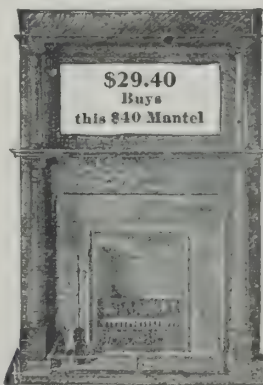
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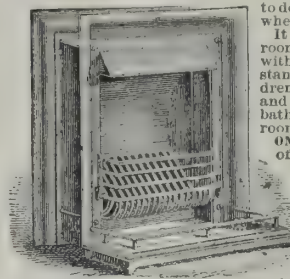
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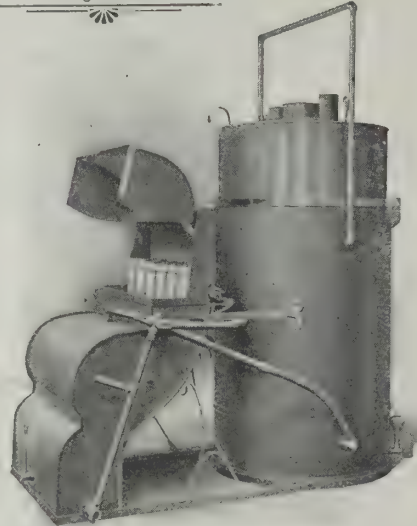
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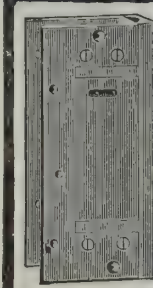
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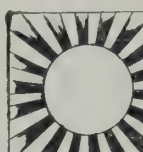
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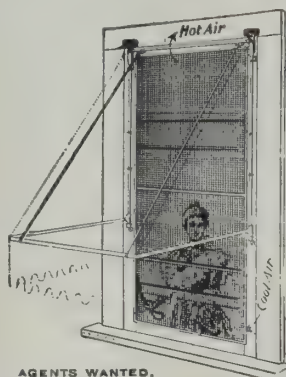
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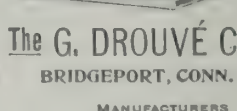
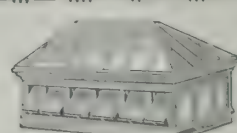
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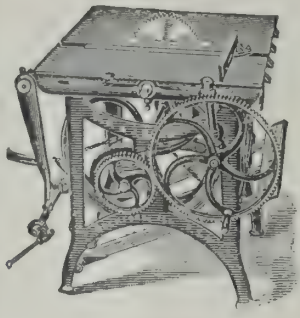
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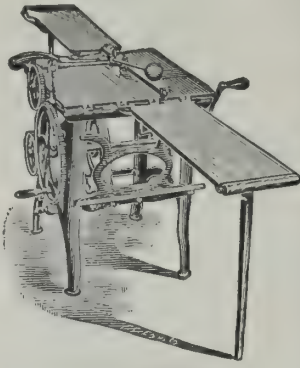
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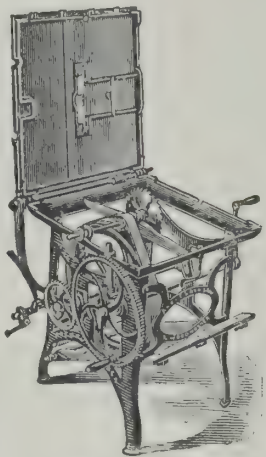
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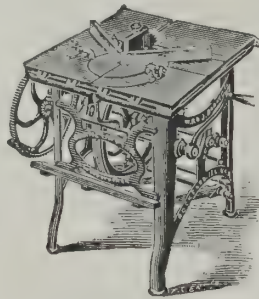
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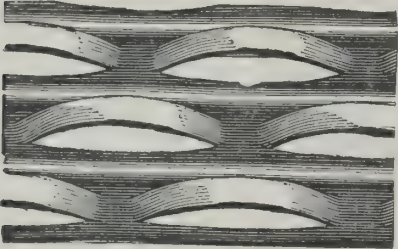
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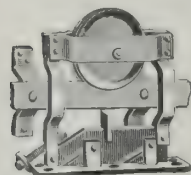
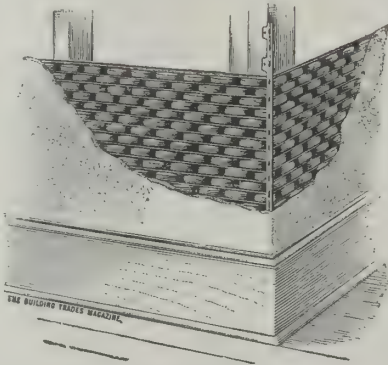
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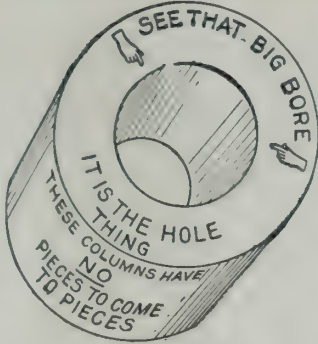
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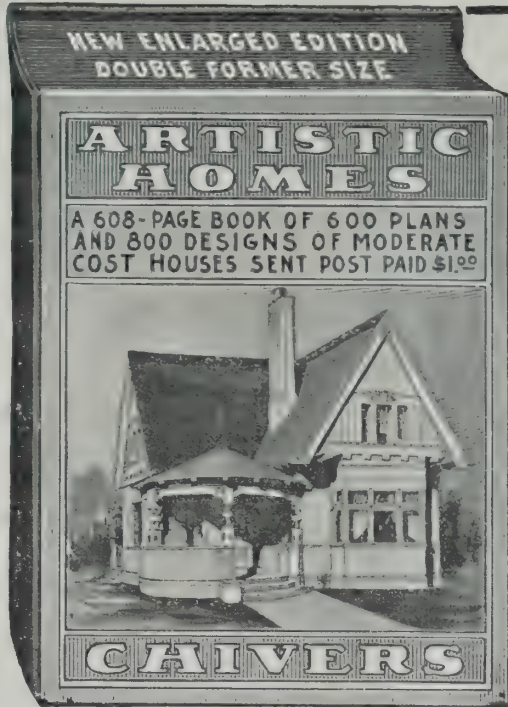
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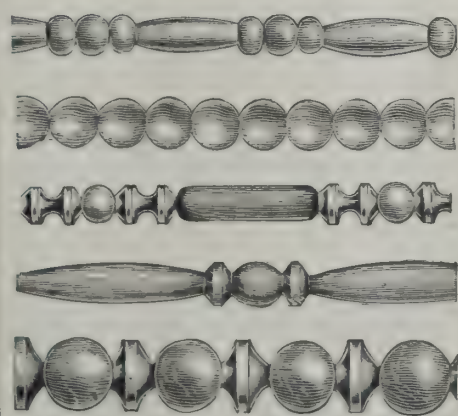
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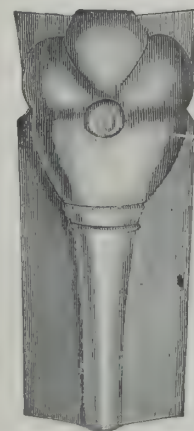
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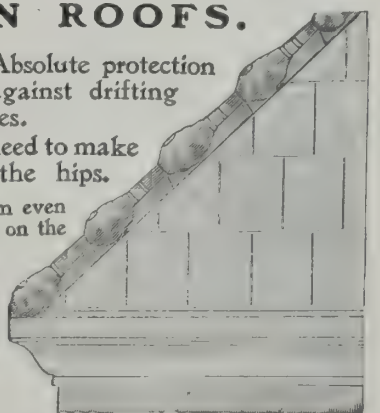
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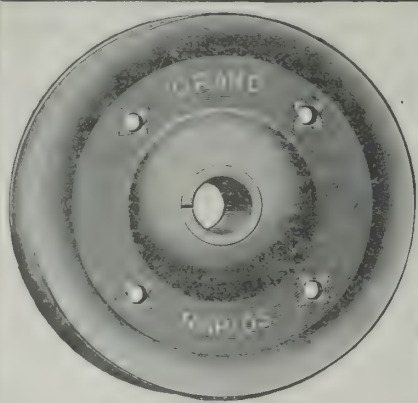
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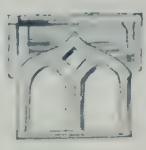
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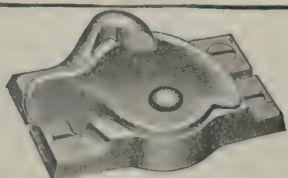


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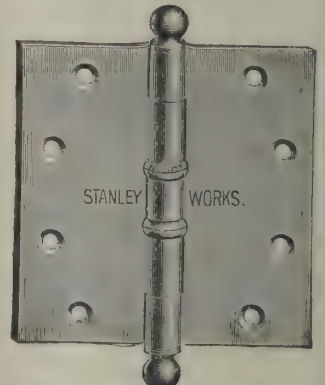
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INTERIOR, LIVING-ROOM.

"MARLETON HOUSE," A COUNTRY SEAT AT MAMARONECK, N. Y.—See page 17.

MR. FRANK A. MOORE, ARCHITECT.

SCIENTIFIC AMERICAN BUILDING MONTHLY

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MONTHLY COMMENT.

FEELING in architecture is one of the most difficult art qualities to express. It is perhaps the one high art quality in which American buildings are chiefly deficient. Yet a building to be a real work of art must be expressive. English architects have succeeded in making plain brick and stone speak to a more marked degree than American architects. Our lives seem too hurried, our methods of work too rapid, our ways too mechanical, perhaps, for real refinement to appear in every work of architecture. In England this quality has long been characteristic in much of the better class of church work, the English leading modern architects in this respect in such buildings with no competitor in sight. And a very weighty reason may be in the fact that English architects have, as a rule, much less to do than American. The professional emoluments of foreign architects are distinctly less than those of many American architects are accustomed to. They have fewer things to do and more time in which to do them.

THE decoration of school grounds, meaning the planting of trees, shrubs, and vines, and the making of flower beds around the school, is becoming one of the most important and useful means for creating an appreciation of environment. Children are susceptible beings, and the flowerless home is the better for a love of flowers planted by their cultivation at the school. Parents, moreover, quickly learn the value of such adjuncts, and many a life is made better by the changes this new policy is introducing. Not only is the school house becoming a positive object of civic beauty, but it is losing much of the sombre and dreaded character with which it is so frequently associated. The school house is the center of the life of many a village and town.

Although the financial rewards of foreign architects are much less than those that come to American architects, the foreigners often have opportunities for monumental work and splendid achievements that seldom come to American designers. No such structure has ever been built in America like the Nouvelle Opera in Paris; no single scheme of civic embellishment has ever been proposed in America with so much probability of success and realization as the Victoria Memorial for London; the Continental cities like Berlin, Vienna, and Budapest contain realizations in monumental erections that have no counterpart in this country. For several years past American architects have realized this, and a new ambition has arisen, which is reflected in the increased demand for monumental buildings whenever opportunities arise for their erection. New York has some fine examples of this type in process of construction at the present time, of which the new Hall of Records and the New York Public Library are the most conspicuous examples.

One of the regrettable facts in modern architectural improvement is that there appears to be no way in which the destruction of old buildings can be prevented. Modern progress appears to be eminently destructive to old buildings. The economic reason, of course, is that old buildings were built for old purposes; when old conditions passed away and new ones came in, the old buildings must give place to the newer structures. And so the good old things must go, and in their place come brand new buildings, with many modern requirements and conveniences, and often, unfortunately, as little art as can be used. The old city of New York now possesses but one colonial dwelling-house, the Jumel Mansion, which is fortunately likely to be preserved. Many fine old houses still remain in the outskirts of the city, but their permanency can not be assured. The destruction to which we have become so accustomed in this country has long since spread to Europe. Returned travelers bring back harrowing tales of picturesque old places made new and bright with uninteresting modern structures. It is unfortunate that this should be so, but it is difficult to see how it can be avoided.

Green as a decorative color is coming more and more into general use. It is strange there should have been any hesitancy in selecting it, for it is the color of nature, the color that, it would seem, harmonizes with every color and condition. It is beautiful and restful, and when this is said there is hardly any more to be added. Green curtains, green woodwork, green furniture abound this year, and in very delicate and beautiful shades. There are greens and greens, and not all of equal beauty. But put the right sort of green in the right place and the happiest result will ensue.

The elevated railway has become so important a device for transportation in large cities that its esthetic effect is a question of the highest public value. That it is a positive detriment as interpreted in New York is known to all beholders, and that it is quite unnecessary this should be the case is equally patent. The fact is there is no possible excuse for disfiguring public highways by any sort of construction. It is bad enough when the private property along a street is disfigured with ugly buildings by people who know no better; it is much more serious when the street itself, the property of the public, is injured by a heavy and hideous structure. Good art in any form costs, and it costs more to-day than at any previous time in the world's history. But it is just as valuable, just as serviceable. Some regard for esthetic considerations should be required from any commercial company receiving the valuable franchise of erecting a railroad upon a public thoroughfare.

OVER decoration is one of the commonest faults of modern house furnishing. Too much of a good thing is often worse than nothing at all. A room that is sparsely furnished is helped by a rich wall decoration; one that is filled with a multitude of objects is injured by a conspicuous wall covering. The ceiling is a particularly dangerous place to over decorate. It can rarely be treated with much ornament in our small American houses. It should be in harmony with the room, cover and crown it; more than that should be avoided.

"CHEAP" HOUSES.

"CHEAP" houses are the bane of our American home life. It is difficult to avoid the proposition of the most for the least money, but no more serious error can be made in house building than to assume that a "cheap" house is necessarily a bargain. Bargains may, of course, be had in houses as in most products from time to time, but they are the exception, and a rare exception at that. The "cheap" house with its tawdry exterior, its undecorative qualities, its poor construction, its lack of permanency, its coldness, dampness, and perhaps generally unsanitary conditions, is a poor

place to live in, a poor investment for money, and a wretched encumbrance to land. It is something that should not be built, and it is equally clear that it is something that should not be encouraged.

Nevertheless it is an unquestioned fact that the people of modest means greatly outnumber those of ample wealth. They are people, moreover, who must be housed, and who must be housed in buildings adapted to their means. The cost of houses is, therefore, a very vital question, and the relationship of cost to sanitary and esthetic values is a matter of the utmost importance.

The question, however, is not a hopeless one. Low-priced houses we must have, and always will have so long as there are people who can not afford to live in costly dwellings. It is a condition that must be admitted, and the solution of the problem of the "cheap" house will not be solved by the contention that they should not be built. The characteristics of a "cheap" house are very well known and easy to define. It is small in size; it is carelessly built; it is faulty in construction; it has been erected with the smallest possible amount of modern conveniences and appliances for comfort; it is thoroughly "cheap," with a cheapness that permeates every part of its structure; its ornamental qualities are either completely wanting or essentially vulgar; it is kept in poor condition, and it is a structure that no historian of architecture would dream of considering in the most extended treatise. It is a structure that expresses no happiness, that gives no satisfaction, that is without ornamental qualities, and that, in a word, has nothing to commend it, save that it is a rough shelter from the elements, perhaps a screen of some privacy, and has cost as little as it could.

Mere increase in cost will not in itself better things. Some betterment may, indeed, follow, and, if wisely applied, may result in some much needed improvement. This is particularly the case when the additional sum has been expended in better materials, better construction, more improved apparatus. On the other hand, there is a certain fatal irresistibility in scroll work, large carved brackets, formless porches and odd window hoods that is destructive to all ideas of art, and more harmful in their results than an utter monotony of plain boards.

Very much more than mere money for our houses is needed; a wider appreciation of what a house is, how it should be built, and how it may be adorned. We do not so much need more money as we need more thought, for thought, when applied to buildings, means more art and better result. No house should ever attract one because of its small cost; yet the lowness of price is time and again put forward as a reason why houses should be purchased and people settle down to live in them. Live? By no means; one may exist in a cheap house, but it is impossible to live a good wholesome life in one, a life in which the house itself helps.

Thought, care, watchfulness, taste, these are the elements needed in the creation of a house, and "cheap" houses are only possible because these essentials are ignored in its design and erection. Almost every one is familiar with two houses of equal cost, one of which is good and pleasing, while the other is bad and unpleasant. The latter has been an "easy" job, readily turned out, swiftly built, completed with general indifference. The other house is good simply because more thought has been expended upon it; its designer has tried to do something, and has tried to do it as well as he could. The matter can be concisely put in mathematical form:

Building materials + thought = good houses

Building materials — thought = bad houses.

Bad houses are not necessarily cheap houses—the more's the pity—but a "cheap" house is invariably bad. Everything is sacrificed to a false idea of economy; labor, materials, taste, appliances, everything is lost sight of save the idea of expending as small an amount of cash as possible. Thought, having a financial value, is dispensed with at the outset; for the building of a "cheap" house is one of the things that can be done in this world without any expenditure of mentality.

It is fair to admit that no substitute for the low-priced house exists, nor can one be found. The problem is not how to get rid of it, for that is impossible, but how to better it. People must learn to know what constitutes a good house and what houses are for; for they must learn to appreciate how far a good house goes toward the making of a good home; they must realize there is a moral side to architecture as helpful or as harmful as good or evil in any shape; they must realize some standards in house buildings, and learn to hate the "cheap" house because of its cheapness.

This may not seem to be a tangible suggestion, but translate it into actual buildings, apply it to the "cheap" houses one knows, carry it to its logical conclusion, and the "cheap" house of the present will become a thing of the past. Our cities and towns and villages will be transformed, and the value of architecture in the humble field of the modest home will be broadened and widened.

TALKS WITH ARCHITECTS

A TALK ON HOUSE FITTINGS.

THE interview which follows is with a gentleman most competent to advise and suggest in all matters relating to the sanitation and heating of the house, but who, for reasons of his own, does not desire that his name be printed in connection with his remarks. It is hardly necessary to add, perhaps, that this is a genuine interview, and were the name of the speaker made public it would be at once recognized as one of the foremost living authorities on his subject. His talk so abounds with practical suggestions of immediate value to the readers of the BUILDING MONTHLY that it is here set down as he gave it, though at his request his identity is not made known.

We seated ourselves at a table in a pleasant place, and I opened my battery of questions. My friend demurred at the scope of my queries, and protested I must not

the sewer could be imagined, and the law of New York wisely forbids it. The cellar sink is supplied direct from the water supply of the house, and its nozzle is often a screw for hose attachment.

"The refrigerator, as I have said, is in the basement. This is not only a matter of convenience to the servants—a question which should never be overlooked in the well equipped house—but it also permits attachment to a waste pipe, by which the waste water takes care of itself. The refrigerator should be washed out with hot water twice a week, and certainly before the Saturday supply of food and ice is placed within it.

"The basement is generally a few feet below the level of the sidewalk, and contains a number of rooms and devices for the service of the household. Here, for example, is the servants' water closet, which should never be placed in the cellar, because sufficient inclination for the waste pipe can rarely be obtained there. It must be provided with a cistern, supply pipe and

"The scullery is another room, and is arranged as a place in which to wash the pots and other heavy utensils. It requires a separate sink and is otherwise adapted to its special work. When the servants have a dining room in the basement, which frequently is the case with very large houses, a separate pantry is provided in which their dishes are washed. The family dining-room is now seldom placed in this part of the house. Ladies object to going down into the basement to eat, where there is a low ceiling, and general inconvenience has rendered this plan obsolete unless it be unavoidable. The space in the front of the basement formerly used for the dining-room is now very generally used as a billiard-room, in which case a toilet room is arranged close to it.

"For the dining-room we come up into the first story of the house, where it is generally located at the rear, with a butler's pantry adjoining. This has its sink, of copper or, if the most modern apparatus is used, of



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GARDEN OF MRS. JOHN L. GARDNER, GREEN HILL, BROOKLINE, MASS.—See page 19.

confound him with the encyclopedia. But he good-naturedly submitted to my persistence, and we were soon deep in the sanitary and heating problems of the thoroughly equipped house.

"The fittings of the house," he said, "begin with the cellar, which lies at the foundation of all things in domestic architecture. Here is the furnace or other heating apparatus, and here the sanitary engineer begins to install his apparatus. Let us neglect the heating apparatus for the time, and follow out the sanitary equipment of the house.

"A cast iron sink is one of the imperative fittings of the modern cellar. It is needed, not only to give a water supply to this part of the house, but also for the waste from the refrigerator. The refrigerator is generally placed in the basement, near the kitchen, but far enough away from it so that the ice is not melted. While pans to catch the waste water are in common use, the most effective way is to carry off the waste by means of a pipe which empties into the sink, into which the water falls. The sink waste pipe is provided with a trap and is connected with the sewer. Nothing more injurious than to connect the refrigerator with

trap, and be placed where the apparatus will not be liable to freeze.

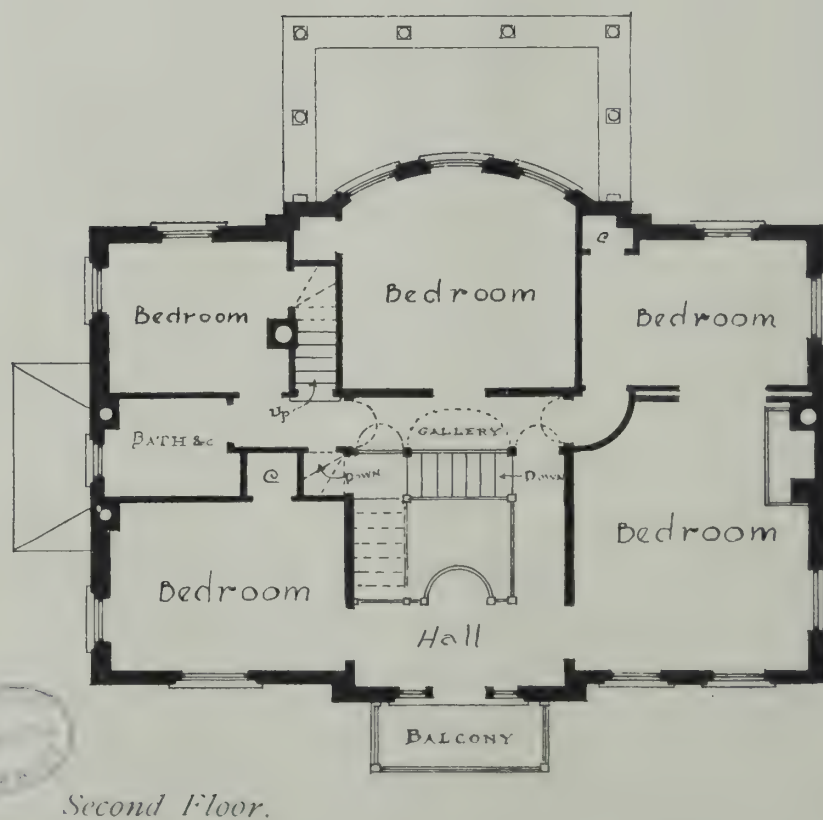
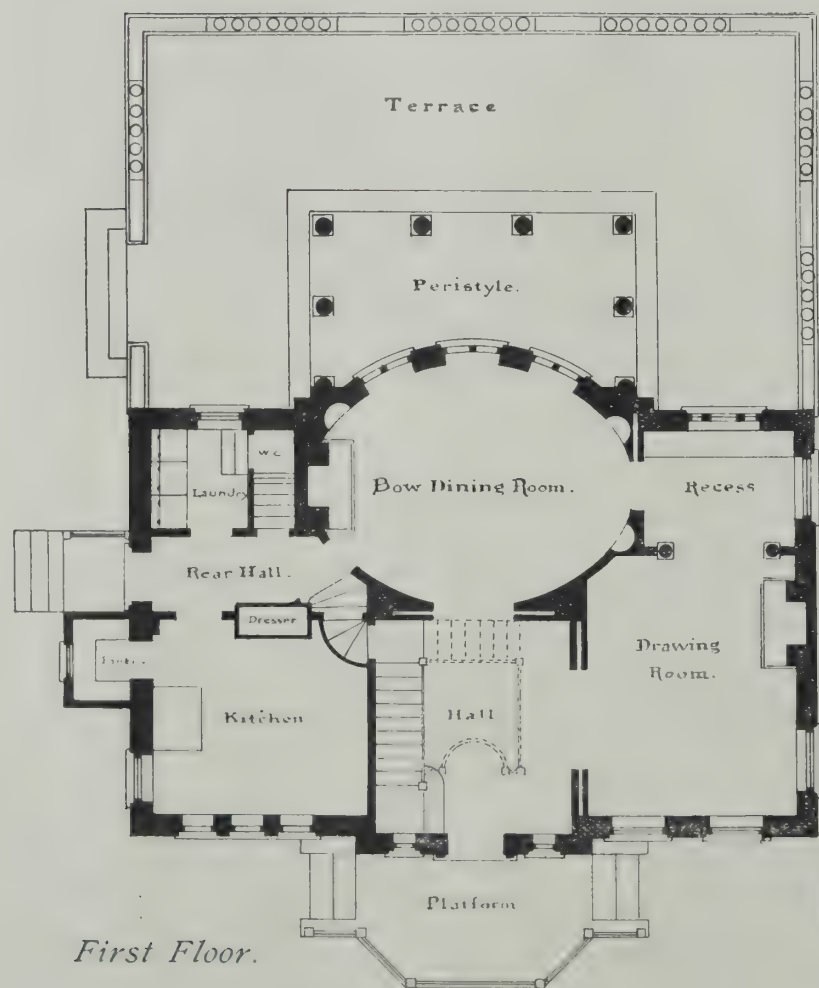
"The kitchen plumbing begins with the sink, of most important room. It is fitted up with a multitude of conveniences and devices, of which the range is the most important. The modern range of the most approved type has appliances for cooking with coal on one side and with gas on the other. It is provided with a hood, which gathers the smoke and fumes that pass into a heated exhaust flue and are thus carried off. It must not be connected with the smoke flue or the value of the device will be lost.

"The kitchen plumbing begins with the sink, of which the most approved type is of porcelain with roll rim. With this should go ash drip trays for draining dishes. The laundry is also in the basement, and is provided with a set of three or four stationary tubs, according to the size of the family and the space available for this purpose. The tubs are made of various materials, of slate, soapstone, and enameled iron; but here also the most approved type are porcelain roll rimmed. Sometimes two sets of tubs are provided, one for the family and one for the servants. A stove for heating irons is indispensable.

porcelain, with a marble slab and back. Porcelain is not only cleaner itself than copper, but it is easier washed and is preferable in many ways. Rubber or wood mats are provided for the slab and sink in order to preserve the dishes and glassware from danger of breakage. Fine dishes and glass are never sent to the kitchen, but are washed in the butler's pantry. The pantry, in addition to its sink, has a number of other conveniences, including a china closet, drawers for towels, towel racks, etc.

"Above the first floor the sanitary equipment of the house is chiefly to be found in the bathrooms. If the house is a large one there will be a number of these. Each will contain a bath, water closet and lavatory, and, if there be room, a needle and shower bath. The bath is of porcelain, roll rimmed, and the lavatory will be of the same material. The porcelain apparatus supplied for bathrooms is exceedingly strong and heavy and not easily broken. A vessel dropped into a china bowl may break the bowl; when dropped into a porcelain lavatory it is liable to be broken itself, an accident generally much less costly than where the apparatus is broken.

(Continued on page 15.)



"EASTOVER," AT WYOMING, N. J.—See page 15.

MR. JOY WHEELER DOW, ARCHITECT.



BEDROOM CORNER.



CORNER OF HALL, LOOKING FROM DRAWING-ROOM.

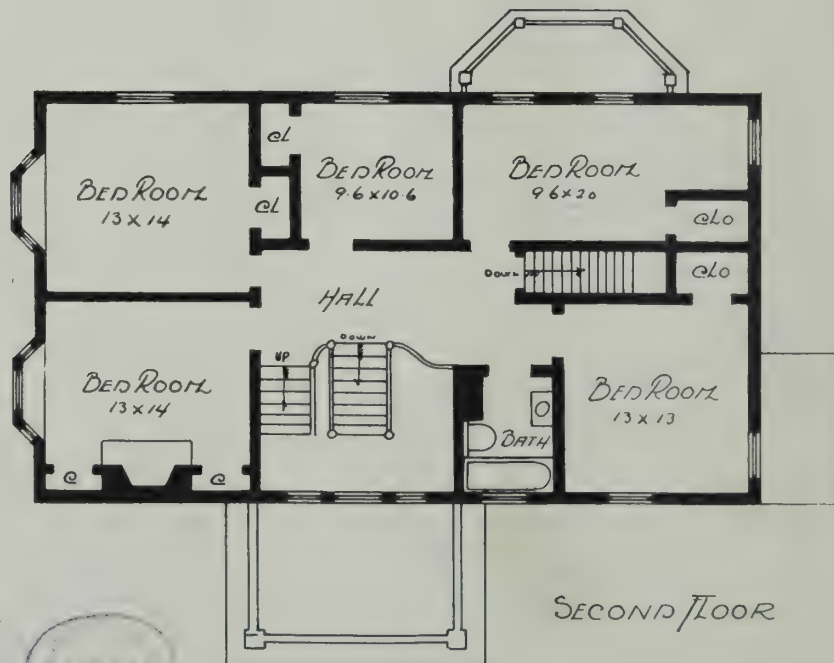
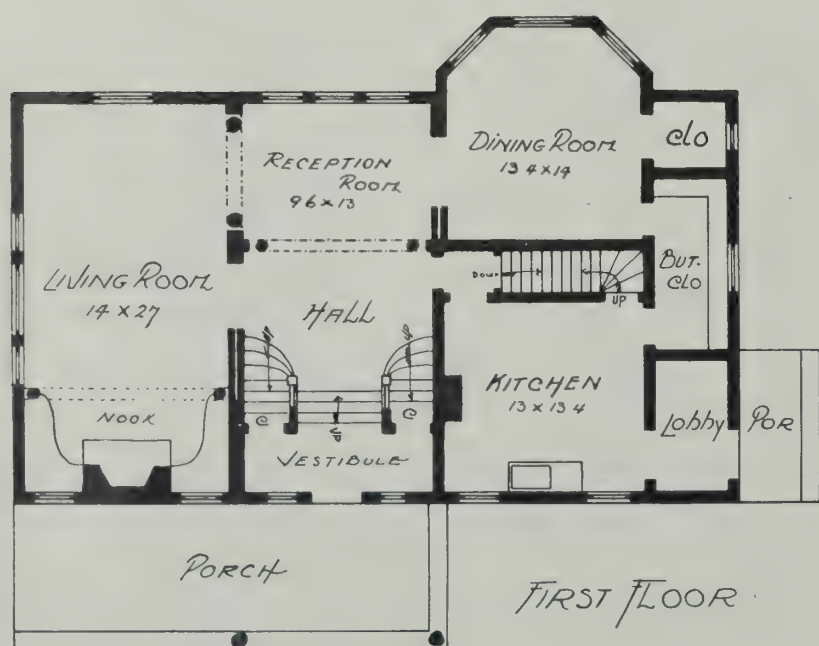


UPPER HALL AND GALLERY.



"EASTOVER," AT WYOMING, N. J.—See page 15.

MR. JOY WHEELER DOW, ARCHITECT.



A COLONIAL HOUSE AT BROOKLINE, MASS.—See page 16.

MR. C. E. PARK, ARCHITECT.



A MODERN DWELLING AT SOUND BEACH, CONN.—See page 16.

MR. HERBERT LUCAS, ARCHITECT.



"MARLETON HOUSE," A COUNTRY SEAT AT MAMARONECK, N. Y.—See page 17.

MR. FRANK A. MOORE, ARCHITECT.



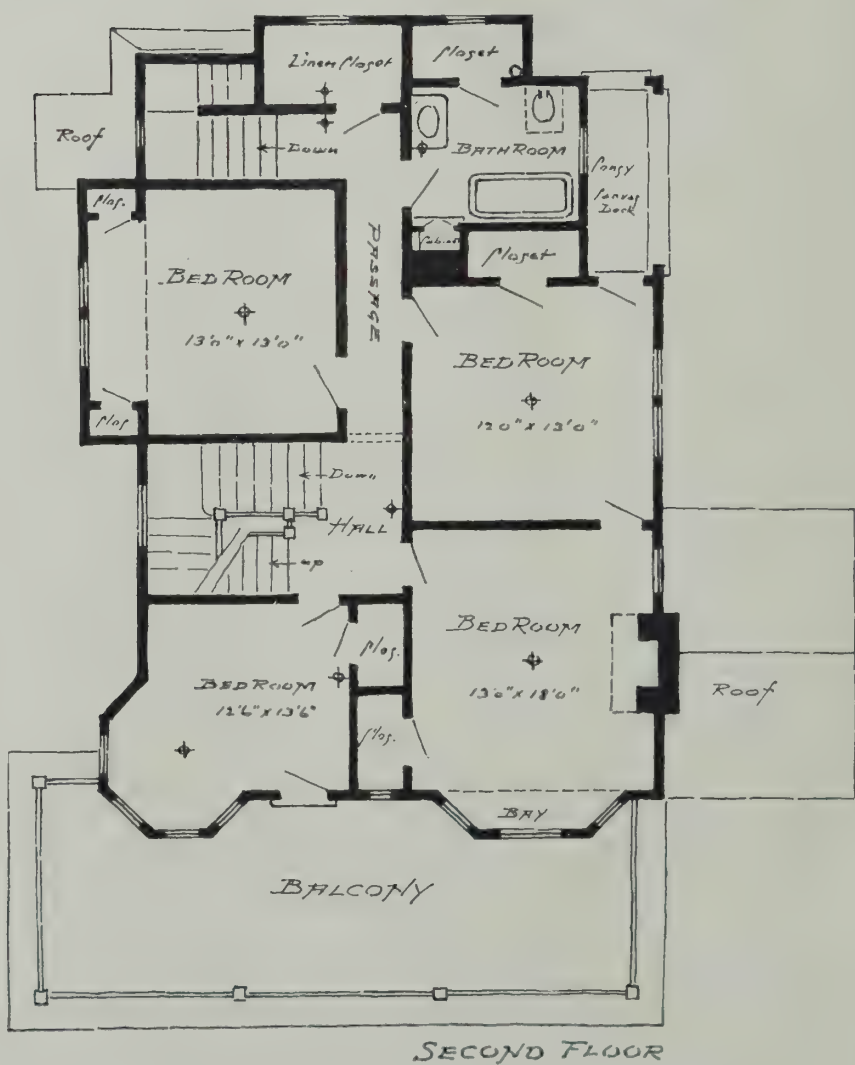
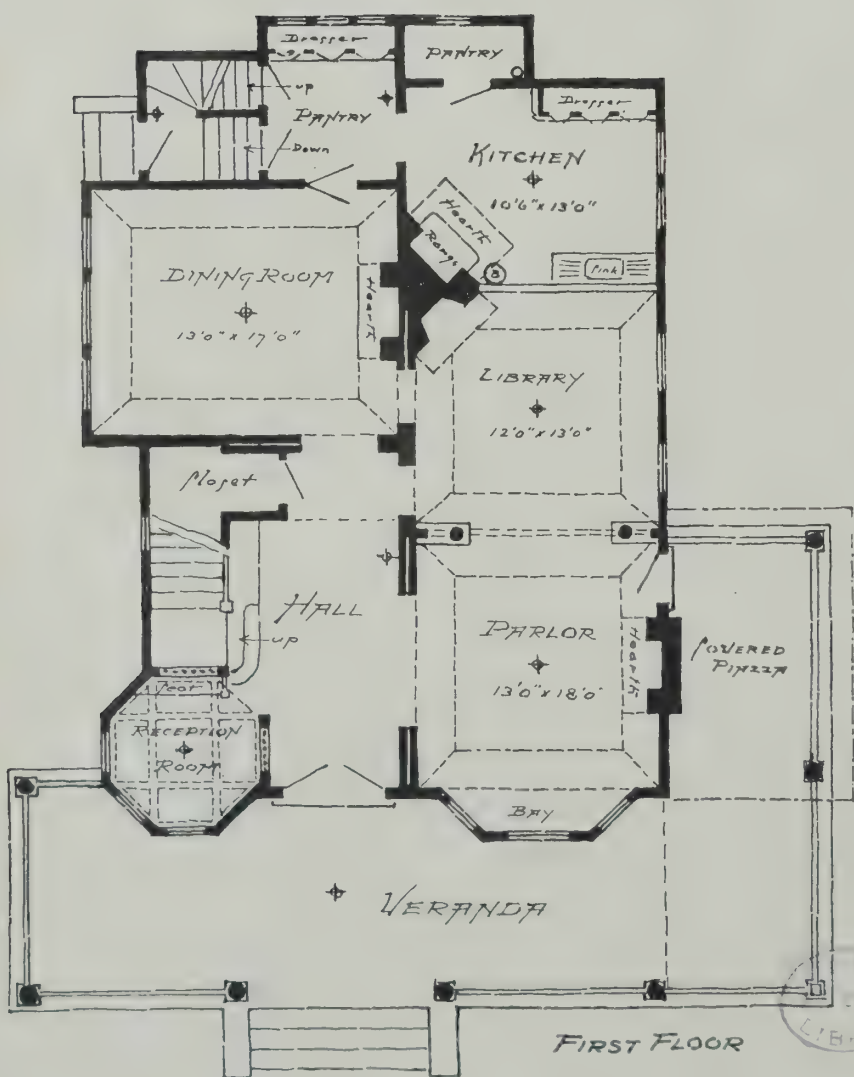
LIBRARY.



DINING-ROOM.

"MARLETON HOUSE," A COUNTRY SEAT AT MAMARONECK, N. Y.—See page 17.

MR. FRANK A. MOORE, ARCHITECT.

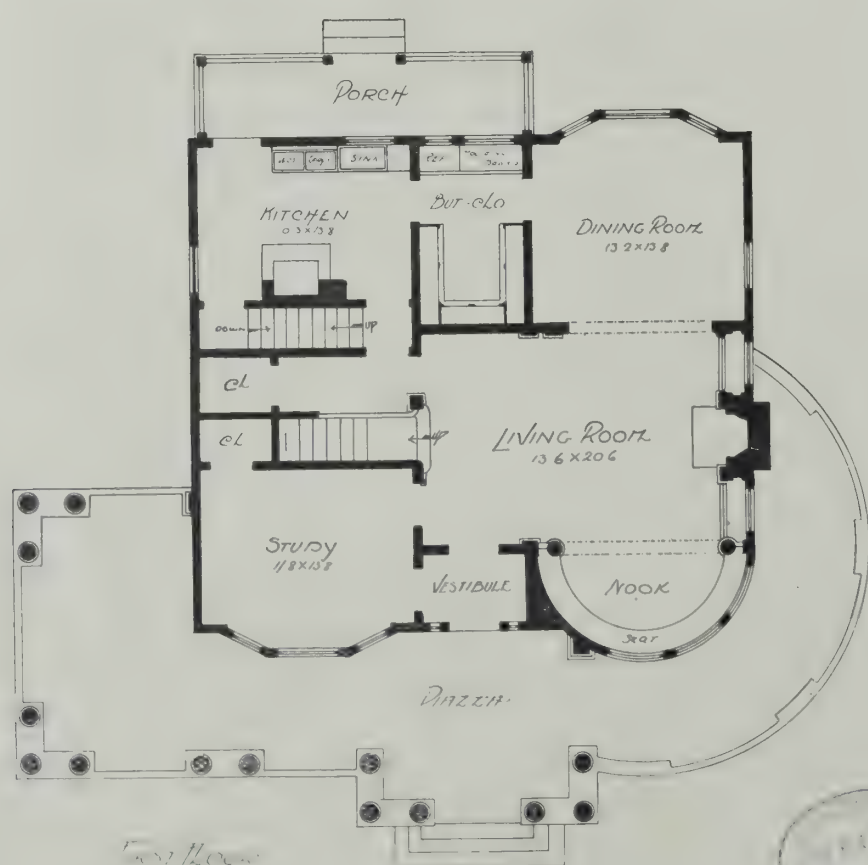


A MODERN DWELLING AT DYKER HEIGHTS, BOROUGH OF BROOKLYN, N. Y.—See page 18.

MR. C. SCHUBERT, ARCHITECT.



A RESIDENCE AT GLENSIDE, PA.—See page 19.
MR. ALBERT ELLIS YARNALL, ARCHITECT.



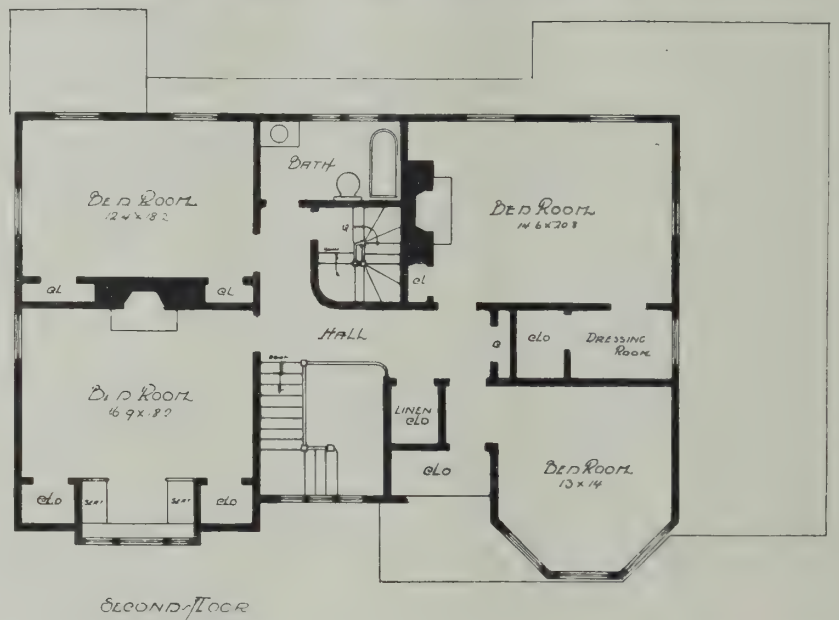
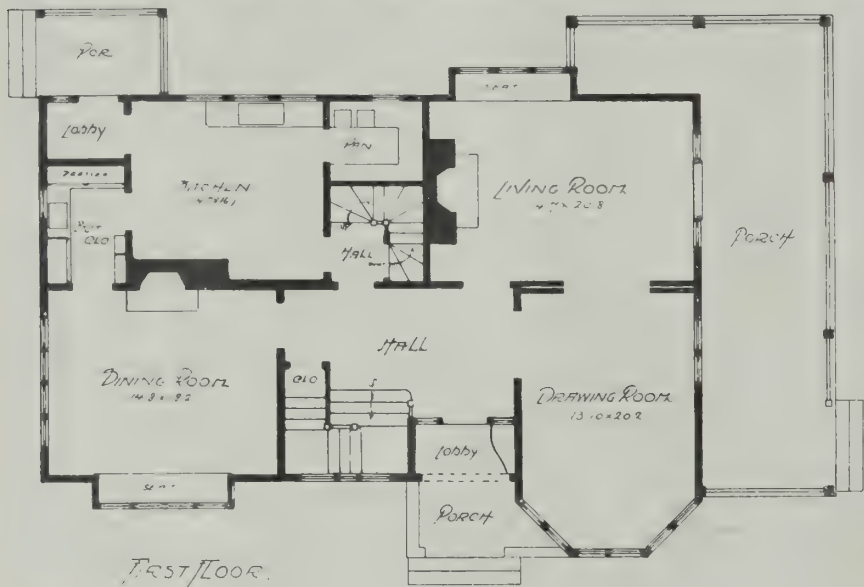
A RESIDENCE AT TUCKAHOE, N. Y.—See page 15.

MESSRS. ACKERMAN & ROSS, ARCHITECTS.



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GARDENS OF MRS. JOHN L. GARDNER, GREEN HILL, BROOKLINE, MASS.—See page 19.



A RESIDENCE AT CHESTNUT HILL, MASS.—See page 19.

MR. H. S. FRAZER, ARCHITECT.

A TALK ON HOUSE FITTINGS.

(Continued from page 3.)

"In addition to the apparatus I have named, the bathroom sometimes contains a bidet and a sitz bath. Other fixtures include a small closet for bottles, powders, etc. The furniture for lavatory, bath, etc., is usually soap cups, brush holders, sponge holders, holders for toilet paper, a bath seat, and a number of towel racks. The room must be well supplied with air, and special provision must be made for ventilation if it has no outside window.

"An important convenience for the upper floors is a housemaid's closet, which contains a housemaid's slop sink. This is made of porcelain, with a flushing rim, and it is provided with a faucet for drawing water. It is used for emptying waste, and for water supply for cleaning and other purposes.

"Every well appointed house has a bathroom attached to the guest chambers, and a servants' bathroom, closet and lavatory in the basement. In the top story is generally a bathroom for the use of the servants.

"The water supply is obtained from the street main. When the pressure is sufficient the whole house is supplied direct; if it is not, a tank must be placed on the roof. If the water does not rise to fill it during the night a pump must be used for that purpose. An electric pump is generally employed. The tanks are of wood, lined with copper or lead, copper forming the preferable lining. They are sometimes of iron, being made of cast iron plates or of wrought iron, the latter being the most expensive. There should always be an overflow from the tank emptying onto the roof, and arranged so that the overflow will be indicated to some one in the house by means of a tell tale.

"I should add that the kitchen must be provided with a dumb waiter, and it will be found a special convenience if this extends through each story. Where there is no yard for drying clothes a drying-room must be arranged in the basement, with screens to roll in and out. The drying chamber must be connected with an exhaust flue to carry off the steam.

"As for the heating apparatus there are three general kinds, hot air, water and steam, both of the latter being by the indirect and the direct methods. Furnaces are portable and brick set. The open fireplace is the best possible means of ventilation, but it is very costly in coal consumption and produces much dust and ashes."

BARR FERREE.

THE ROCHAMBEAU STATUE.

ON this page will be found an illustration of the Rochambeau Statue, which was formally unveiled on Saturday, May 24, 1902, in Lafayette Square, Washington, D. C.

The unveiling of the statue of the Count de Rochambeau marks an important epoch in the history of the two great republics, and the celebration of this international event brought together a remarkable gathering of representative men of the United States and France, one in which the armies and navies and civil governments of both nations united in doing honor to the soldier, who, as the official representative of France, extended a helping hand to the colonists when they were struggling for independent existence.

The statue, which is of heroic proportions, is of bronze, the work of Ferdinand Hamar, the deaf mute French sculptor, and is a replica of the one erected in France, Mons. L. Parent was the architect, and the stone work of the pedestal, which is of limestone, is by Ferdinand Gaussen. This monument not only

typifies the happy relation of the two peoples, but forms a handsome addition to the statuary of the United States Capital. It is graceful in design, artistically executed, and well placed.

Its most salient feature is the figure of the general in the uniform of his rank and with arm outstretched in the attitude of command. A female figure representing Liberty, with drawn sword in one hand, extends protection over the American eagle, which, as a young fledgling, is posed in an attitude of defiance against attack. The left hand of the figure bears aloft the entwined flags of France and of the United States. Lower on the pedestal is displayed the shield of the United States, bearing the thirteen stars of the original colonies.

"EASTOVER," AT WYOMING, N. J.

"EASTOVER," a residence presented on cover and pages 4 and 5, was erected for John Goodchild, Esq.,



THE ROCHAMBEAU STATUE.

at Wyoming, N. J. The underpinning and the foundation for the terrace are constructed of rubble stone, which is coated with concrete and forms an ogee water-table. The building above is constructed of brick laid in Flemish bond in white mortar. The window sills and the lintels to the second story windows are of limestone. The roof is shingled, left to weather finish. The house has no piazza, but at the rear is a peristyle, with columns and cornice. This peristyle has an open roof, which is covered with an adjustable awning during the heated term. Beyond the peristyle is a terrace which gives additional room for an open piazza, etc. The peristyle is reached from the dining-room by three casement windows extending to the floor. Dimensions: Front, 42 ft.; side, 31 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The entrance is into a square hall trimmed with white pine, treated with ivory white enamel. Here is an ornamental staircase with risers and treads of quartered oak; the rail is polished mahogany,

and the twisted balusters are painted the same as the trim. There is a Colonial wainscoting and a modern cornice around the hall. Beyond the hall is the dining-room, bow in form, trimmed and treated in a similar manner. This dining-room is furnished handsomely with a Colonial wainscoting, china cabinets with leaded glass doors, a plate-rack supported on corbel brackets, and an open fireplace of red brick and tiled hearth. To the right of entrance hall is the drawing-room, trimmed with white pine and treated with white enamel. It is Colonial in style, and has a wainscoting and massive wooden cornice on corbel brackets. The open fireplace is provided with a tiled hearth, brick facings, and a mantel with overmantel and mirror. A recess, separated by an archway with fluted columns with Ionic capitals, contains a seat and triple windows. The kitchen, laundry and its dependencies are furnished with all the best modern conveniences. The second story is trimmed with white pine, treated with white enamel. The walls are painted in flat colors. There

are five bedrooms with closets and a bathroom. The bathroom has a vitrified tile floor and a glazed tile wainscoting four feet in height. It is furnished with porcelain fixtures and exposed nickelplated plumbing. There is one bedroom and storage on the third floor. A cemented cellar contains a furnace-room, provided with a Gurnee heater, coal bins, etc. Mr. Joy Wheeler Dow, architect, Wyoming, N. J.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT TUCKAHOE, N. Y.

THE modern residence presented on page 12 has been erected for Mr. Allan Hay Seaman at Tuckahoe, N. Y. The underpinning is of red brick laid in red mortar. The superstructure is constructed of wood and the exterior framework is covered with matched sheathing, paper, and cedar shingles, which are dipped in stain of sienna color. The trimmings are painted in ivory white. The roof is covered with shingles and stained a moss green. Dimensions: Front, 34 ft.; side, 33 ft., exclusive of piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The living-room is trimmed with cypress stained a dark gray green. It has a paneled wainscoting and pilaster and column effect and also a paneled ceiling. The nook with its paneled seats, and the open fireplace built of Roman brick, with the hearth and facings of the same, and mantel of Colonial style, and the bookcase built in on either side of fireplace are all good

features, as is the staircase. The study and dining-room are trimmed with cypress, and are stained a dark grayish-green color. The butler's pantry is of large dimensions and is provided with drawers, etc. The kitchen contains a sink, laundry tubs, range, and a dresser. Like the pantry it is trimmed with North Carolina pine, finished natural. The second and third stories are trimmed with white pine treated with white enamel. The second floor contains four bedrooms, large closets, dressing-room and a bathroom, the latter wainscoted and fitted with porcelain fixtures and exposed nickel-plated plumbing. There are two bedrooms and a trunk room on the third floor, and also a dark room for developing photographs in the tower. The cemented cellar contains furnace room, coal and wood bins, etc. Messrs. Ackerman & Ross, architects, 156 Fifth Avenue, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.



FLORAL ARRANGEMENTS FOR SMALL TREES.

A SINGLE tree in a small yard, remarks a contemporary, gives promise of great possibilities for floral decoration. A seat arranged around the trunk will not only be effective when the large plants are used inside for decorating the dining-room and parlor, but will be quickly converted into a bower of beauty when the potted palms and other house plants are arranged upon it.

Every well regulated home must have a generous supply of decorative plants in these days; palms, rubber plants, Norfolk Island pines, and sturdy shade-loving begonias and ferns that have been doing duty as inside beautifiers, will demand a suitable place for outside recuperation during the summer months, and this sheltered nook, with the large pots arranged on the seat around the tree, will prove an ideal summer home. As the pots will have no contact with the soil, there will be no danger of the roots reaching down through the drainage hole and taking root in the soil beneath, as is often the case when potted plants are set upon the ground or sunk into the soil for the summer. And, being raised from the ground, the ivy and other trailers that are so desirable for growing about the decorative plants in large pots or plant tubs will have an opportunity for generous lengthening during the growing season.

BRIDGING SMALL STREAMS.

RUSTIC bridges may be introduced in large grounds if there is any excuse for their existence, points out a recent writer. Even the tiniest stream may be artistically bridged. Park effects are often copied on the home grounds with good results. One of the most charming to be found on private grounds was copied with good effect from one of the smallest bridges in a public park. The small bridge over the little stream, requiring very little rustic work to reach across, had the rustic effect extended with graceful sweep on both sides, with the same length curving each side of the pathway as was required on the bridge. Then the pathway just beyond the bridge had the sweep of lawn left plain on one side, with a generous clump of evergreen shrubbery on the other.

Another tiny stream may be artistically bridged with a curved archway of stone. When the foundation of the arch can be arranged to start from the clump of trees and end on the level lawn at the other side the effect will be particularly picturesque.

Where generous stone bridges and arches may be introduced in connection with flowing streams and little waterfalls, then the large grounds may be beautiful, indeed. When the grounds are sloping, with a spring gushing from the lowest spot, the usual plan is to arrange a curved and flower-bordered walk leading to the spring, with an artistic little spring house or summer house built near by. But even finer than this is the stone structure set in the side of the slope directly over the spring, with a circular tunnel-like arrangement through which the cool water gushes.

The sloping lawn leading down to the spring will be most effective if left perfectly plain, with only the covering of velvety sod, and with a great clump of rhododendrons grouped at one side, and tall oaks, maples, and evergreens in the distant background.

SIMPLE GARDEN RULES.

THE Cleveland Home Gardening Association prints the following list of "things to remember:"

- Dig deep and make the soil fine on the surface.
- Keep pulling out the weeds all summer.
- Sprinkle the seeds every day.
- Then water the bed thoroughly every few days during the whole summer.
- Pick your flowers every day.
- Keep your garden neat.
- Flowers require attention all summer.

By attending to these things one may have flowers all summer, as well as to show in October.

It is well to remember also that the plants will flower longer if not allowed to go to seed. If you wish to save seeds allow only a few flowers to remain. The more you pick the more you will have.

THE CARE OF FERNS.

MR. EBEN REXFORD contributes some good advice on the care of ferns to Vick's Magazine. "Many complaints," he says, "come in about the ravages of scale on the Sword and Boston fern. I have been fortunate enough to keep my plants comparatively free from this enemy, and I do it by using fir-tree oil soap, more as a preventive than a cure, for I believe that it pays to keep off all insect pests.

A COLONIAL HOUSE AT BROOKLINE, MASS.

THE engraving on page 6 presents a house of Colonial treatment, built for John P. Freed, Esq., at Brookline, Mass. The underpinning is of red sandstone laid up at random. The superstructure is covered with matched sheathing, paper and clapboards. These clapboards are painted Colonial yellow and the trimmings painted white. The roof is covered with shingles stained a moss green. Dimensions: Front, 50 ft.; side, 33 ft., not including porch. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The entrance is through a broad doorway, on either side of which is a stained glass window. Steps lead from the vestibule to the level of main hall. This hall is treated with white enamel, and has a paneled wainscoting and staircase rising from either side to a main landing, from which there is one flight to the second floor. This staircase is of attractive design in Colonial style, and is lighted by a cluster of three leaded glass windows on the main landing. The living-room is treated with white enamel, and has a Colonial wainscoting. It contains a nook with paneled seats and an open fireplace with tiled facings and a hearth and mantel of Colonial style. The nook is separated by an archway supported on columns. The reception-room is separated from both the living-room and the hall by columns, forming an arcaded effect. The dining-room is trimmed with oak and has a paneled wainscoting and ceiling beams. The china closet is well fitted up, and the butler's pantry is provided with drawers, dressers, and bowl complete. The kitchen is provided with all the modern conveniences. The second floor contains five bedrooms, large closets, and a bathroom, the latter provided with porcelain fixtures, and exposed plumbing with nickel-plated fixtures. The third floor contains three bedrooms and a billiard-room. A cemented cellar contains furnace-room, cold storage, laundry, etc. Mr. C. E. Park, architect, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A MODERN DWELLING AT SOUND BEACH, CONN.

WE present a modern dwelling on page 7, erected for Mr. Edwin J. Lucas, at Sound Beach, Conn. The balustrade to the piazza and the entire first story are constructed of hard, well burned red brick laid in white mortar. The second and third stories are constructed of wood and the exterior framework is covered with sheathing, good building paper and shingles, left to weather finish. The trimmings are painted white. The blinds are painted bottle green. The roof is covered with shingles and stained and finished with a moss green effect. Dimensions; Front, 38 ft. 6 in.; side, 39 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 ins.; third, 8 ft. The hall and living-room are trimmed with white pine and treated with white enamel. This hall contains a paneled seat and an ornamental staircase, which is separated from the living-room by an archway supported on Colonial columns. The living-room has two bay windows provided with paneled seats, and an open fireplace, furnished with Roman brick facings and hearth and mantel. Both the hall and the living-room have paneled wainscoting and ceiling beams. The dining-room is trimmed with white pine and is finished natural. It has a paneled wainscoting and a beamed ceiling. The butler's pantry and kitchen are trimmed and treated in a similar manner, and each apartment is fitted with all the modern conveniences complete. The second floor is trimmed with white pine and is treated with white enamel. This floor contains five bedrooms, six well fitted up closets, linen closets and a bathroom; the latter is furnished with porcelain fixtures and nickel-plated plumbing of the Ronalds & Johnson make. There are three bedrooms and ample storage on the third floor. There is a cemented cellar under the entire house, containing a furnace-room, laundry, coal and wood bins. Mr. Herbert Lucas, architect, St. James Building, 1133 Broadway, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

GLASS BATHTUBS.

GLASS bathtubs are being made in Germany, and are said to have many advantages over metal and enamel, the principal one being that they are much cheaper. They are made in a solid piece, and one can be turned out complete in about five minutes. The method of manufacturing glass bathtubs, as described by a contemporary, is very simple. The molten glass is taken from the surface and placed in a mould, which can readily be swung into any desired position. Compressed air is then admitted through a flexible tube which connects with the bottom of the mould. The air pressure is regulated by valves. As soon as the article is finished it is switched into an annealing chamber, where it is again heated and then allowed to cool. This toughens it, and after the process it is ready for use.



THE SERVANTS' ROOM.

GENERAL cleanliness and tidiness in the servants' room is the theme of a recent editorial article in Harper's Bazar, under the somewhat lurid title of "The Servant's Right to Esthetics." It would seem almost needless to point out the necessity for such things, and yet a course of esthetics for servants is a bit startling. A servant's room is seldom a joyful place; generally, it is a small apartment crowded away in the most retired part of the house, next the roof, if one has a house of one's own; close to the chimney stack, if one lives in a flat. Frequently this is unavoidable, but the room should always be clean; it should be neatly furnished, and it should not under any circumstances be made the catch-all for waste and cast-off worn out articles. It is better to throw useless things away than to encumber the servant's room with them.

THE UTILIZATION OF THE ROOF.

THE idea that a roof is a covering to the house and nothing else seems likely to be relegated to the limbo of the old-fashioned. That the roof is a covering pure and simple is likely to be true for country dwellings for some time to come; but the pressure upon space in the cities has become so marked that the roof is being used more and more. The evolution of roof utility has been from the useful to the ornamental in a very direct way. In large city buildings the roof has long been used for water storage and other useful adjuncts to the high building. In apartment houses and hotels drying rooms and laundries were placed on the roof, and then some one discovered that kitchen odors, having ascending quality, did not penetrate the house when this apartment was erected on the top. Finally, the capability of the roof as a place of observation and for relaxation was made manifest, although this might have been thought of first of all. Forthwith the roof ceased to be merely useful, and became a source of pleasure and delight. The roof garden speedily became an established institution of large clubs and hotels. From such quasi-public buildings to the private house was but a step. The time can not be far distant when every well-appointed house will have its roof garden. A new use will be found for the roof, and a new joy given to city life. Meanwhile, to complete the story, it should be added that the value of the roof as a sleeping place in hot summer nights was long since found out and utilized by the ingenious inhabitants of New York's great East Side. All the joys of life are not confined to sweldom.

EARLY MEANS OF ILLUMINATION.

THE earliest means of illumination, points out a writer in the Art Interchange, was the pine knot. The "Betty lamp"—a shallow circular oval or triangular arrangement filled with tallow or grease and made of pewter, iron, or brass—next came into use for lighting purposes. In this lamp was a wick or twisted rag, which was placed in the grease with one end left protruding, which could be ignited with the aid of a flint and steel, or possibly a live coal would be applied for this purpose. Candles appeared later, and the making of those first candles was a process exceedingly tedious. They were made of either a tallow or a pale green wax made from the bayberry, the latter emitting a delicious and fragrant odor when lighted. Sconces and candle beams—receptacles for holding homemade candles—decorated the walls of the houses of the more well-to-do, while candlesticks, snuffers and snuffer boats were to be seen in almost every house, together with a peculiar contrivance called a candle wedge, made of rings, cups and pins—the metal sometimes being pewter, but more frequently iron or brass. This utensil enabled the frugal and economical housewife to burn every inch of the candle, not the smallest bit being wasted.

Lamps and lanterns, gilded and painted, convex and plain, for use mostly in halls or on staircases, came into fashion in the early part of the eighteenth century. The oil used was made from the "spermaceti whale," and at that period there were numerous whaling expeditions from all parts of the Atlantic coast, but especially that of New England.

WASHING TABLE LINEN.

FINE table linen, or white doilies with embroidery, should not be washed in hot water. Their beauty is better preserved by using cold water and pure white soap containing borax. They should be dried in a shady place. Only washing compounds of the best kind should be used for fine handkerchiefs or laces.

Sanitation

PUBLIC UNTIDINESS.

PROFESSOR A. D. F. HAMLIN, of Columbia University, has performed a real public service in his recent article in the Forum on "Our Public Untidiness." That such a state of affairs is only too common among us must be patent to every one; yet it is of value to have the facts in the case stated as succinctly as they have been by this brilliant writer and keen observer. "The discovery that there is more of filth, squalor and general slovenliness in public places and works, in streets, squares, river-sides, docks, quays, roads, and bridges in the United States," writes Professor Hamlin, "than in any other country of the first or even second rank is a humbling but salutary experience. In what may be called our public housekeeping, in the outward appearance and maintenance of places and works administered by public or semi-public enterprise we rank with Turkey rather than with England or Germany. Oriental Japan, tiny Switzerland, and slow-going Holland stand far ahead of the United States in this respect. Our national slovenliness is seen in dirty streets and unsightly water fronts, in ill-kept squares, ragged sidewalks, and abominable pavements, in shabby railway stations and embankment walls built up of rotting sleepers, and in a thousand shiftless substitutes for solid, permanent works. The unspeakable country roads which abound in so many regions not only illustrate the existence, but also demonstrate the folly of this semi-barbarous slackness of administration, for they constitute the most costly means of transportation possible, impose a heavy tax on every farmer and other resident, and are a clog upon the general prosperity of the regions they traverse. Tidiness and the efficient maintenance of public works cost more in the first outlay than negligence, but they save this excess many times over in the end."

SANITATION IN FRANCE.

SOME unfavorable comparisons between the United States and foreign countries in the matter of public sanitation are made by Professor A. D. F. Hamlin in his article in the Forum. The picture is not overdrawn so far as America is concerned; but in making up his list of countries abounding in bad public sanitation Professor Hamlin appears to have forgotten the gross neglect and lack of modern appliances that abound in that fairest of European countries—France. The lack of sanitary apparatus in the hotels and dwelling houses, the disgusting conditions of street roadways, even parts of public buildings, are far more dreadful than anything known in America. And this is the more remarkable since the French are fully alive to the value of good appearances, more so, in fact, than any other people. Paris, of course, is well kept externally, but the smaller provincial towns and less frequented places are in a condition so bad as to stand in a class entirely alone and apart. Our general untidiness is, indeed, a national reproach, but the absolutely unsanitary condition of French towns is a disgrace to civilization.

LIGHT AND SANITATION.

SIR J. CRICHTON BROWNE, in a recent address on "Light and Sanitation," pointed out some of the relations between light and sanitation in England. Until a very recent date there were legislative restrictions on the enjoyment of this common necessary of life. The window tax, which was instituted in 1696 and continued in force until 1851, among other evil results blighted domestic architecture for 150 years; it undermined, in some degree, the physical vigor of the people, and stamped on them decrepitude from the vestige of which we are doubtless suffering to this hour. The effect of the window tax was to accustom the people to dingy dwellings. It is for practical sanitarians to insist on the big window and the open window, and to teach that the light and air that these admit sweeten and disinfect the house, and prevent sickness and divers diseases. But the big window will not be of much avail if the light can not gain access to it, and its situation as well as its size is therefore of sanitary importance. It should be so placed that it is not heavily overshadowed, and that the sunlight during some part of the day can directly fall on it.

And here we encounter the great crux in connection with sanitary house-building in our towns and cities. It is impossible to witness without anxiety the piling-up process that is going on.

There are streets in London that are like tunnels, courts like damp cellars, rooms innumerable—even in fashionable quarters—that no glint of sunshine has ever entered.

"MARLETON HOUSE," A COUNTRY SEAT AT MAMARONECK, N. Y.

WE give on pages 1, 8, and 9 "Marleton House," the country seat of Mr. Alfred Marshall, at Mamaroneck, New York. The house is built of large field stone for the first story, while the second story is constructed of wood, and shingled on the exterior, and left to grow gray with age. Features of the exterior of the house are the massive stone chimneys and the spacious piazza on the water front. The roof is also covered with shingles and treated similarly. The house is built for permanent use, and the exterior walls are back plastered, and are made as tight against bad weather as is possible. Dimensions: Front, 68 ft.; side, 40 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 11 ft.; second, 10 ft.; third, 9 ft. The hall is one of the most attractive features of the first story and is trimmed with Italian walnut. It has a wainscoting glued and put together so as to make a perfectly smooth surface without panels or mouldings. The large fireplace is flanked with double pilasters, which treatment is carried around the entire hall; a heavy beamed ceiling and a wooden cornice being part of this treatment. The hall windows are glazed with clear leaded glass, the transoms only having a small amount of color in them. An attractive nook with paneled seats is a good feature. The staircase is of an ornamental character, and rises to a broad landing with a paneled seat and a cluster of windows. The library is treated in the Empire style and is trimmed with mahogany, and ornamented with gold. The furniture and decorations are carried out in a similar style. This library is provided with a paneled seat, bookcases and an open fireplace, furnished with a hearth and facings of Mexican onyx and a mantel of handsome design. The billiard-room is treated in a dark green color, and is fitted with a high wainscoting and a plate shelf for pewter mugs, etc. The fireplace has a high shelf with a large amount of green terra-vit tiling, which contrasts well with the bright red burlap on the walls above the wainscoting. There are high-backed seats on either side of the mantel which are hinged to the corners of the chimney-breast, so that they can be swung around in front of the fire or kept back out of the way as may be desired. Opposite this fireplace there is a bay window provided with a paneled seat, which is raised one step from the floor. The small octagonal den is wainscoted with Alhambra tiling, with mosaic floor and a domed ceiling in gold, and leaded glass windows to correspond. The dining-room is trimmed with quartered oak, and it has a paneled wainscoting and a heavily beamed ceiling. The spaces between the wainscoting and the ceiling beam at cornice are covered with tapestry. The fireplace is handsomely fitted with tiled facings and a hearth in design and a mantel. The dining piazza is quite a novel feature, and access from the butler's pantry is obtained through a door cut in at the side wall. The butler's pantry is fitted up with drawers, dressers, cupboards, and sink complete. The kitchen and servants' dining hall, and also the pantries, are provided with all the best modern conveniences. The second floor rooms are arranged for the comfort of the different members of the family. There is the family room and children's room with intervening boudoir, five guests' rooms, twelve closets, two bathrooms, and one large private bathroom on this floor, besides three servants' rooms and bath, which are located over the kitchen extension. The bathrooms are fitted up in a handsome manner with tiled floors and wainscoting, and are furnished with porcelain fixtures and exposed nickel-plated plumbing. A feature quite necessary for a home of this size is the linen closet, a well-lighted room with shelves, inclosed with doors, and having a counter shelf with wide drawers under the same. The third floor contains three guest rooms, sewing room, play room with fireplace and large closets, and four servants' rooms. The cellar contains the heating apparatus, cold storage, wine cellar and store room. The builder of the house was Mr. Joseph Readon, of Mamaroneck, N. Y., and the decorations and furnishings were done by Theo. Hofstatter & Co., of New York. Mr. Frank A. Moore, architect, Windsor Arcade, Fifth Avenue and Forty-seventh Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A COUNTRY SEAT AT SAN MATEO, CAL.

WE regret that the description of the handsome country seat of Spencer E. Slade, Esq., at San Mateo, Cal., illustrated in the June issue of the BUILDING MONTHLY, did not give credit to Mr. D. F. Oliver as the architect of so interesting a design.

It is proposed to demonstrate smoke abatement at the St. Louis Exposition by showing that soft coal can be burned with economy and without the emission of injurious smoke. The power plants of the Exposition will be smokeless, and an effort will be made to persuade the railroads running near the grounds to adopt smoke-consuming devices.

Stable Lore

MODERN HORSELESS STABLES.

The first floor is on the sidewalk level, and has ample space for four or five machines. On this floor there is a lift, with a capacity sufficient to handle the heaviest machines, so that they can be lowered to the cellar, which has a concrete floor, and is well adapted for storage of machines not in constant use. At the rear of the first floor is a repair pit and washstand, where the machines may be cleaned, and from the pit the machinist can easily get at the machinery and motors under the vehicle. Adjacent to this pit is a workbench with tools, and an electric charging board is provided, equipped with all the necessary instruments, and a charging socket in a convenient place, so that a machine may be charged where it stands. Robe poles and a closet for great coats, hats and gloves are near the door and at the foot of stairs leading to the second and third floors. The second story is arranged for the owner's use, or for the family of the chauffeur or machinist, as the owner may choose. If the owner wants to reserve it for his own use, he will find at the rear a room about seventeen feet square with a fireplace on one side, lighted by two large windows, suitable for a billiard-room.

At the front of the building is an octagonal room with a large fireplace on one side and a wide window on the street. It may be used as a sitting or dining-room, and leading from it is an alcove, in which a bed or lounge can be placed. Next to the alcove is a bathroom fitted with conveniences, including a shower bath of the latest type. Next to the bathroom is a small, compactly arranged kitchen, in which suppers or light meals may be prepared. A wide hall connects the dining-room in the front with the billiard-room in the rear. The entire suite is shut off from the stairs, that continue on up to the chauffeurs' apartments on the third floor, which has a large living room with an alcove, in which is the gas range, sink, washtubs, pantry, closet, etc. Three bedrooms and a bath complete the interior.

STABLE VENTILATION.

SOME notable studies of horses and their care were contributed to the Boston Transcript some time since by Mr. Francis M. Ware. One chapter is devoted to hints on the furnishings and arrangement of stables.

The stabling of a large number of horses in one building, not subdivided into smaller apartments, points out Mr. Ware, is bound to cause much variation of temperature and ensuing liability to colds, etc. Where the outer doors are being constantly opened and shut the draughts are very penetrating and persistent; where many horses are taken out at certain hours the ensuing drop in the temperature is very noticeable, and the absence of the bodily heat which emanates from them is quickly indicated by the thermometer; nor is any provision made to insure the comfort of those which remain.

Ventilation by windows directly over horses' heads is always bad, and such windows are likely to allow draughts about the edges of the frames or not infrequently to be cracked or broken; any direct draught is bad, but should always come from behind, from which direction the animal is best adapted to resist any evil effects, as he shows us by his attitude when free and exposed to rain, wind, etc. Windows are best behind the stalls for this reason, and also because the light is more evenly diffused and not too brilliant. With an air shaft or two along the gangway (of about twenty-four inches square), to carry off the foul night air, and with the provision of fairly lofty ceilings, all stables should be comfortable during the sleeping periods, provided they are not unduly overcrowded, and arranged as to partitions, etc., as we shall here discuss. Sudden changes come at night, and grooms are not to be trusted to arise and close ventilators, windows, etc.; therefore, it is best to insure a general airiness and sweetness of surroundings which shall provide a reasonably pure atmosphere even when rather tightly confined.

STABLE DESIGN.

THE same writer makes some valuable suggestions on the general designing of stables. If ground space allows, he says, all stables are better if one-storied, and this also allows great economy in framing, while there is no disturbing the horses at night by the men tramping about overhead, nor by the rattling of feed in the "chutes" at meal-times. Men's rooms and feed-rooms are much more convenient if all are upon the ground surface, and all materials as hay, etc., are more easily handled. Plenty of air space over the animals is, of course, advisable.



The City House

SPECULATIVE BUILDING IN NEW YORK.

THE speculative builder, who formerly confined his operations to low-priced houses and inferior apartment houses, has found a new field for his work in building single houses of the most expensive kind, and, strange as it may appear, finds a ready market for them. A local paper has summarized the present situation with regard to these buildings in New York.

The highest price ever paid for a private dwelling in New York City erected on a speculative basis was \$500,000, for an unfinished house on Fifth Avenue, between Sixty-fourth and Sixty-fifth Streets. Previous to this, the record had been held by a well-known banker, who paid \$450,000 for a Fifth Avenue dwelling between Seventy-seventh and Seventy-eighth Streets. In the last three years a few speculative houses have been marketed for \$300,000, and recently two houses as far north as Ninety-first Street were sold for \$500,000, or \$250,000 each. No more remarkable evidence could be desired of the growth of metropolitan wealth and luxury. That there is in New York a sufficient number of wealthy people to make a market for private houses selling for from \$300,000 to \$500,000 is only another reminder of the change which has come over the city in the last twenty years.

When the fashionable district was originally constructed with the regulation brownstone front, the speculative builders rarely considered the possibility of selling their houses, even the most elaborate of them, for more than \$40,000 or \$50,000. Such houses as were undertaken on a speculative basis brought, as a rule, far less than this sum. Lexington Avenue, which, when the up-town residential district was opened, was regarded as the coming fashionable thoroughfare, was a favorite field for the speculative builder twenty-five and thirty years ago. Houses that were marketed for \$18,000 or \$20,000, however, were looked upon as bringing a pretty good figure. Such speculative building as took place in the streets between Madison and Fifth was usually of houses that sold for \$40,000 to \$50,000 each. The citizen who intended to spend such a large sum—as it was then looked upon—for a private house preferred to build it himself, to have it designed by his own architect, and to be representative of his own tastes and ideas of comfort.

The speculative builder was a somewhat crude and unimaginative factor in the city's development. His energies were limited to the production of row after row of prosaic brownstone dwellings on lots eighteen, twenty, and twenty-five feet wide, all designed after the same pattern, and all finished off and decorated with a painful sameness. Any idea that it was part of the builder's duties to consult the wishes and personal tastes of the public, to introduce any variety into their products, in accordance with the varying tastes of their purchasers, never for a moment occurred to the speculative builder.

Conditions have changed in the last three years. There is still a certain element that prefers to plan and build its own houses; but there is rapidly developing a high class market for the product of the speculative builder. As a matter of fact, the best of the builders—and only the best of them can command the financial support necessary for their operations—have grown remarkably in taste and judgment in the last few years, so that they are much better able to anticipate the needs of the modern millionaire than the millionaire himself. As a matter of fact, the most representative in the last few years have made a special study of the needs of the average family of wealth and social position, and have thus reduced their business to an exact science.

That the modern speculative builder is doing much for the city at the present time is evident from a slight examination of his works. He no longer builds his houses after a general plan; the old high-stoop brownstone front, the emblem of respectability a generation ago, has disappeared, and in its place is the whitestone American basement, the fronts presenting, in their design and ornamentation, a wide and wholesome variety. Just how successful they are architecturally is a question for the artist to decide; but that they are comfortable and pretentious living places is evident. Tiled kitchens and laundries, heavily wainscoted mahogany dining-rooms, marble vestibules, white, immaculate drawing-rooms, large foyers and libraries, commodious bed-chambers form the basis of these modern houses, and Otis elevators, the most comprehensive systems of plumbing, and electric lighting apparatus are the contributing comforts. Security is furnished in the fact that the houses are absolutely fireproof from cellar to roof.

A MODERN DWELLING AT DYKER HEIGHTS, BOROUGH OF BROOKLYN, N. Y.

THE dwelling illustrated on page 10 was built for Walter L. Johnson, Esq., at Dyker Heights, Borough of Brooklyn, N. Y. The underpinning is of rock-faced red sandstone, laid up in red mortar. The superstructure is of wood and the exterior framework is covered with sheathing and good building paper. The first story is covered with clapboards and is painted a silver gray, while the trimmings are painted white. The remainder of the framework is covered with shingles and painted a darker gray, with white trimmings. The roof is shingled. Dimensions: Front, 30 ft.; side, 47 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The entrance hall is trimmed with quartered oak, and has a paneled wainscoting four feet in height. The broad staircase has newel balustrades and rail of handsome design. The leaded window at the side of the staircase is glazed with tinted glass. The reception room is also trimmed with quartered oak, and has a paneled wainscoting of sixteenth century style, six feet in height, and a beamed ceiling. It is separated from the hall proper, on three sides, by fluted columns, with two of the spaces filled in with ornamental spindle work. The parlor and library are trimmed with bird's-eye maple, and each has a paneled base and open fireplace built of brick and tiled facings, and hearth and mantel of handsome designs. Both rooms are separated one from the other by a colonnaded opening. The dining-room is trimmed with sycamore and has a paneled wainscoting five feet six inches in height, with a plate shelf. It contains an open fireplace with tile trimmings and mantel. All the floors are doubled, with a finished floor of maple and oak, with deafening paper laid between the floors. The butler's pantry is fitted up complete with dressers, etc. The kitchen is trimmed with ash and has a tiled wainscoting five feet six inches in height, a No. 11 Richardson & Boynton range in the fireplace, a copper boiler, an earthen sink, Tennessee marble drain, dresser and pot closet. The second story is trimmed with brown ash, and contains four bedrooms, seven large closets, linen closet, and a bathroom furnished with an enameled decorated tub, marble basin, aprons, shelf, shower, medicine cabinet, with stained glass in leaded door, mirror and other fixtures, with exposed nickel-plated plumbing. This bathroom has a tiled wainscoting and a paved floor. The third floor contains three bedrooms and a trunk room. The cemented cellar has a laundry, coal and wood bins, and also a "Garton" boiler steam heater. The American Radiator Company's radiators are used. Cost \$5,500 complete. Mr. C. Schubert, architect, Bath Beach, N. Y. The general contractor was Mr. Leo Ehrlick, of Bath Beach, N. Y.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

CLEANING A HOUSE TANK.

A GREAT deal of damage is often done to a good plumbing system through ignorance or negligence on the part of the owners or engineers of buildings by not taking proper precautions when cleaning a house tank, points out a contributor to the Metal Worker. When the water shows itself murky, instead of employing a plumber to see that the tank is cleaned in the proper manner, the owner, particularly of a private dwelling, will often send some servant up to clean the tank. This is a kind of job that is distasteful, and it is hurried through with as soon as possible. The water supply is shut off, then all the water is drawn off from the tank at some one of the different fixtures in the bathroom below. When the sediment or mud, which has settled at the bottom of the tank, is reached, a servant takes pains to sweep or force down the falling supply line as much of the mud as he can, being ignorant of the result of such work. The disadvantage of this course will show itself as soon as the tank is filled again. All of the cold supply lines to bathrooms and under floors will be found to be more or less choked with mud, and also the water back in the kitchen ranges. An instance has come under my observation where the tank had not been cleaned for a long time and slimy mud had formed above the outlet and stopped it up. It was cleaned carelessly, as described, and many of the cold water supply pipes were filled with mud, making several days' work for the plumber to clear them. The proper way to clean a tank is to empty it to within about 6 inches from the bottom and close all of the pipe openings with round, tapered soft wood plugs. The solid matter should then be removed and the tank scrubbed and the dirty water taken up in pails and poured into the gutter. The solid mud can be disposed of in the ash cans. This method prevents the pipes from being choked and insures the tank being clean.

An application of niter will remove ink spots from furniture. A teaspoonful of salt water and six drops of niter should be applied with a feather. Rub quickly with a damp cloth to remove the niter.



Civic Betterment

THE MUNICIPAL ART SOCIETY.

THE Municipal Art Society of New York has recently published its Year Book—the first. This society was organized as far back as 1892. It completed two important pieces of public decoration, a group of painted panels in the Appellate Court Room of the Criminal Courts Building, by Edward Simmons, and the Hunt Memorial, on the Fifth Avenue side of Central Park, by Bruce Price and Daniel C. French. It held one or two important competitions, in addition, for proposed undertakings, none of which were carried out. And then, waxing old in years, as things go nowadays, it was about to be wound up.

But new men came in, new ideas were instilled into the fossilized body, and, presto! a new organization took the place of the old. How successful this has been the Year Book makes clear. Apparently every form of work for civic betterment has been included. There have been committees on conferences with other bodies; committees on special work to suggest special undertakings for the Society; an Exhibition Committee, which held an exhibition of municipal art in New York last winter; a committee on signs and street fixtures, to supply these sadly needed necessities to New York; a committee on private advertising signs, organized to correct some obvious abuses coming within its scope; a committee on the \$50,000 permitted to be expended on works of art; a committee on parks; a committee on thoroughfares; a committee on flowers, vines, and area planting, and a committee on the model city projected for the St. Louis Exposition. It is a strong and brilliant program, which means a great deal of work for a great many people.

A NEW PLAN FOR PHILADELPHIA.

ANY one who imagines that Philadelphia is a place that lags behind the procession because of its reputation in the haunts of the metropolis has no idea either of the people who live there or what is constantly being accomplished by the sheer force of "keeping everlastingly at it." Here is the City Parks Association of Philadelphia, proposing to transform and modify the rigidity of the gridiron plan of Philadelphia, and presenting its reasons for desiring to do so in a handsomely illustrated pamphlet and report, which covers the entire subject exhaustively and satisfactorily. No large city of America suffers so much from the cramped and rigid nature of its plan as Philadelphia. William Penn was a great and far-seeing man, but he could not foresee the necessity for wide streets, nor did he realize the possibility of modern means of traction. Had he been able to do so he would not have laid out a town with streets so narrow that the street cars must go down one and come up another—an inconvenience of arrangement that is painful to those who must submit to it, and harmful to city growth as it is now understood.

The chief feature of the present report is a proposal to adopt a radial plan of streets for the portion of Philadelphia between the Delaware and Schuylkill rivers, south of the actually built up area. The problem here is much simpler than in the undeveloped sections in any other direction. The ground is level. It may have to be filled up to a grade sufficient for the sanitary purposes of the sewerage system, but its sensible development does not require any consideration of the contour of the land, which in other sections requires most careful thought. Mr. Frank Miles Day, the well-known architect of Philadelphia, has prepared an admirable plan for this new work which has disturbed the existing plan as little as possible, but which it is believed will give excellent results at comparatively small cost. The plan includes both straight and curving streets.

Winding, curving streets, the report continues, are far more picturesque than straight ones, and are particularly delightful for residences, whether for the employer or the employed. Curving and diagonal streets give much greater opportunity for diversity of architecture than straight ones do. The main thoroughfares should be straight, and the main business streets are always likely to be straight ones. There is no need for a man's home being on a straight street, and it will be more attractive if it is not. This is true not only of Philadelphia but also of every other city. And it is true of the small town as well as the large one.

ONE of the newest adjuncts to the drawing-room is a writing-table to harmonize in style and ornamentation with the general scheme of the furnishing. It is fitted up with stationery and other conveniences for the visitor, but is not intended for ordinary desk uses.

Legal Notes

CONTRACT WITH ARCHITECT.

WHERE county commissioners employed an architect to draw plans for a courthouse, and thereafter consented to his transfer of the contract to another, and made payments to the transferee, they were not thereafter entitled to object that the contract was unassignable, because one of trust and confidence. *Weatherhogg vs. Board of Commissioners of Jasper County et al.*, 62 N.-E. Rep. (Ind.) 477.

DAMAGES FOR DELAY.

A STIPULATION in a contract for liquidated damages for delay in its performance is not absolutely binding on the court; but if largely in excess of the actual damage, the stipulation may be treated as a penalty and only fair and reasonable damages be awarded. *J. G. Wagner Co. vs. Cawker et al.*, 88 N. W. Rep. (Wis.) 599.

DELAY IN COMPLETION.

IN a suit on a building contract defendant counter-claimed for damages stipulated for a delay in completing the building and alleged a delay of thirty-two days. Plaintiff's manager testified that the building was completed on November 27, twelve days late. He wrote a letter on that date, in which he stated that "five hundred dollars will complete all the work left to do under the contract." *Held*, that a finding that the building was completed after only twelve days' delay was against the evidence. *J. G. Wagner Co. vs. Cawker et al.*, 88 N. W. Rep. (Wis.) 599.

DESTRUCTION BEFORE COMPLETION.

THE sole limitation on the absolute character of a building contract was that if completion was delayed by damage caused by fire, lightning, earthquake, cyclone, etc., the time fixed for completion should be extended. *Held*, that, where an unprecedented storm destroyed the building before completion, the loss would fall on the contractors, though the payments were to be made as the work progressed. *Bartlett et al. vs. Bisbey et al.*, 66 S. W. Rep. (Tex.) 70.

FAILURE TO RECORD CONTRACT.

FAILURE of the owner to record his contract with the principal contractor does not render his property liable to the claims of any laborer, mechanic, or material men, except such as have so complied with the provisions of the statute as to entitle them to their liens. *Niswander et al. vs. Black et al.* 40 S. E. Rep. (W. Va.) 431.

FILING ACCOUNTS.

THE accounts filed in the recorder's office for the commencement of legal process to establish a lien on land for materials furnished in erecting buildings thereon can not afterward be amended so as to increase the amount claimed. *Harris vs. Page*, 50 At. Rep. (R. I.) 859.

FORECLOSURE OF LIEN.

AN action to foreclose a mechanic's lien was begun against the contractor and the owner of the building, and a suit was begun by the owner of the building and his wife to restrain a sale of the premises on foreclosure, on the ground that the wife owned an interest therein, and had not been made a party; the only additional fact alleged in the injunction suit being that the property was community property, and it was not denied in either action that the work had been done. *Held*, that the court having power to consolidate the actions, and having done so, the issues were those made by the pleadings in both cases, and justified a finding that the work had been performed, the value thereof, and that it had been done at the owner's request. *Peterson vs. Dillon et al.*, 67 Pac. Rep. (Wash.) 397.

IMPEACHMENT OF ARCHITECT.

IN order to impeach the action of an architect in certifying to the amount due on a building contract, the evidence must be clear and convincing, and point with reasonable certainty to mistake, fraud, or collusion. *J. G. Wagner Co. vs. Cawker et al.*, 88 N. W. Rep. (Wis.) 599.

INSOLVENCY OF CONTRACTORS.

PERSONAL insolvency on the part of contractors does not relieve them from the obligations of their contract, nor legally justify their abandonment. *McConnell et al. vs. Hewes et al.*, 40 S. E. Rep. (W. Va.) 436.

A RESIDENCE AT GLENSIDE, PA.

THE residence shown on page 11 was built for Mr. W. T. B. Roberts at Glenside Farms, Pa. The underpinning and part of the first and second stories are of red brick laid up in white mortar. The remainder of the building is beamed, while the spaces are filled in with stucco work. The beams and the trimmings are stained a dark brown. The roof is shingled and is left to weather finish. Dimensions: Front, 25 ft.; side, 52 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The hall has a paneled wainscoting and an ornamental staircase, and is trimmed with oak. The parlor is trimmed with white pine treated with white enamel. This room contains a bay window with paneled seat, and an open fireplace furnished with tiled facings and a hearth and a mantel with a paneled wainscoting. The dining-room is trimmed with oak. The butler's pantry is fitted up complete. The kitchen is trimmed with North Carolina pine, and has a range, sink, dresser, etc. The second floor contains three bedrooms, sewing-room and bathroom. This floor is trimmed with pine treated in colors. The bathroom is provided with porcelain fixtures and exposed nickel-plated plumbing. The third floor contains three bedrooms and ample storage room. A cemented cellar contains a furnace, laundry, etc. Mr. Albert Ellis Yarnall, architect, 14 South Broad Street, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT CHESTNUT HILL, MASS.

THE engravings on page 14 show a residence built for Henry W. Bliss, Esq., Chestnut Hill, Mass. The underpinning is red sandstone. The superstructure is wood, covered with matched sheathing, paper and shingles. The shingle work is left to weather finish a natural silvery gray, while the trimmings are painted dark bottle green. The sashes are painted white. The roof is shingled and similarly treated. Dimensions: Front, 50 ft.; side, 34 ft. 9 in., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft.; third, 8 ft. The hall is trimmed with white pine, treated with white enamel. It contains an ornamental staircase with fluted posts, turned balusters and a mahogany rail. The drawing-room is treated in a similar manner, and has a low Colonial wainscoting and a wood cornice. The living-room is trimmed with California red cedar. The fireplace is built of Roman brick, with a hearth and facings of the same, and a mantel. There are bookcases built in on either side of the fireplace, and a paneled seat in the bay window. The dining-room is trimmed with oak and has a wood cornice, window seats and a fireplace built of red brick, with the facings and hearth of the same, and mantel. The butler's pantry is fitted with dresser, drawers, sink and closets. The kitchen has a sink, range, store pantry, etc. The second story is trimmed with white pine treated with white enamel. There are four bedrooms, dressing-room, eight closets, linen closet, and a bathroom on this floor. The bathroom has a tiled floor and wainscoting, and white enamel trim, and contains porcelain fixtures and exposed nickel-plated plumbing. There are three bedrooms on the third floor and ample storage room. The cemented cellar contains a Magee furnace, coal and bins, laundry, etc. Mr. H. S. Frazer, architect, 8 Exchange Place, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

MRS. GARDNER'S GARDEN.

THE garden of Mrs. John L. Gardner at Green Hill, Brookline, Mass., is one of the most interesting of the many interesting New England gardens. Its fame, indeed, is not local, for this sumptuous estate is well known to all lovers of nature. The illustrations on pages 3 and 13 show some aspects of this beautiful place.

The engravings are made from photographs taken by Mr. T. E. Marr, Boston, Mass.

ROOM COLORS.

If the room is without sun, says a recent writer, make pale yellow the color key. If it is cold (on a cliff, or in the mountains, or in shadow of high, neighboring walls) warm it with a blending of mahogany and pink or old rose, and old gold hangings, combined with a relief of lace curtains in ivory or ecru tint. If it is sunny, mahogany or other dark woods and blue will give the desired effect. If it is too dark, light it up with maple, or white enamel, with cream and gold, and chocolate, with rose tones on the walls, with mirrors and lace draperies, or still better, white bolting cloth curtains and furniture scarfs embroidered in gold-hearted (or black-eyed) daisies, and put some bright blooming plants and ferns about the windows.

New Building Patents

THE following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY by MUNN & Co., Solicitors of American and Foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

BUILDING STONE OR BRICK.	J. W. Lahmann, Indianapolis, Ind.	May 6	699,537
ARTIFICIAL BUILDING STONE.	C. W. Stevens, North Harvey, Ill.	May 6	699,587
BUILDING BLOCK.	J. W. Christford, Cleveland, Ohio.	May 27	701,150

CONSTRUCTION.

SIDEWALK TRAP DOOR.	P. H. Jackson, San Francisco, Cal.	May 6	699,468
BUILDING CONSTRUCTION.	M. A. Winget, Columbus, Ohio.	May 13	699,735
VAULT LIGHT.	L. Braud, New York, N. Y.	May 13	699,783
METALLIC ROOF CRESTING.	Norman and Berghauer, Nevada, Mo.	May 20	700,364
CONCRETE AND METAL SKELETON FOR BUILDING PURPOSES.	Otto Ruhl, Bremen, Germany.	May 30	700,443
METAL WINDOW.	A. W. Cooper, Chicago, Ill.	May 20	700,621
BUILDING.	J. A. Martin-Cooke, Arlington, N. J.	May 27	700,794
WALL TILE.	C. T. Inman, Akron, Ohio.	May 27	700,932
METAL ARCH.	R. Gray, Bloomington, Ill.	May 27	701,034

CARPENTRY.

WINDOW.	M. Haberle, Brooklyn, N. Y.	May 13	699,919
STAIRWAY.	F. W. Weber, Boalsburg, Pa.	May 13	699,993
WINDOW.	A. Lorenz, New York, N. J.	May 27	700,956
WINDOW FRAME AND SASH.	H. C. Smith, Cambridge, Mass.		

ELEVATORS.

MECHANISM FOR OPERATING ELEVATOR DOORS.	C. B. Gilmore, Chicago, Ill.	May 6	699,305
DOOR OPERATING MECHANISM FOR ELEVATORS.	J. L. Kall, Chicago, Ill.	May 6	699,329
SAFETY APPLIANCE FOR ELEVATORS.	J. E. Ericsson, Chicago, Ill.	May 6	699,375
ELEVATOR DOOR OPERATING MECHANISM.	H. Rowntree, Chicago, Ill.	May 20	700,375

FIREPROOFING, FIRE-EXTINGUISHMENT.

AUTOMATIC HYDRAULIC FIRE EXTINGUISHING SYSTEM.	James Curry, Rockford, Ill.	May 13	699,665
FIRE-RESISTING WINDOW.	T. Lee, Home City, Ohio.	May 13	699,689
MAIN VALVE FOR FIRE EXTINGUISHING SYSTEMS.	H. Eversmann, Cincinnati, Ohio.	May 20	700,187
AUTOMATIC FIRE EXTINGUISHER.	H. C. Montgomery, Cleveland, Ohio.	May 20	700,218
FIRE ESCAPE.	J. C. McCombie, Malden, Mass.	May 20	700,543
FIRE EXTINGUISHER.	W. H. Paul, Boston, Mass.	May 20	700,603
FIRE EXTINGUISHER.	E. M. Martul, Dayton, Ky.	May 20	700,696
FIREPROOF SHUTTER, DOOR, ETC.	J. G. Wilson, New York, N. Y.	May 27	700,873
FIRE ESCAPE.	J. and P. J. Setbacken, Cynthiana, Ind.	May 27	701,094

HARDWARE.

SASH FASTENER.	J. F. and N. N. Nehr, Stockton, Kans.	May 6	699,223
SASH FASTENER.	J. W. Lyon, Brooklyn, N. Y.	May 6	699,334
DETACHABLE FASTENER FOR HINGES.	E. H. Jackson, Chicago, Ill.	May 6	699,530
SASH FASTENER.	J. H. Scrivens, Cleveland, Ohio.	May 6	699,580
WINDOW FASTENER.	G. E. Mellen, Chicago, Ill.	May 13	699,696
DETACHABLE HINGE.	G. B. Pickop, New Britain, Conn.	May 13	699,970
BURGLAR ALARM AND DOOR LOCK.	L. H. Handy, San Francisco, Cal.	May 13	700,039
LOCK.	Weber and Frey, Baker City, Ore.	May 13	700,106
HINGE.	J. McLean, Boston, Mass.	May 20	700,435
HINGE.	A. W. Brightwell, Owen, Ind.	May 20	700,612
HINGE.	S. E. Le Marr, Palmyra, Ill.	May 20	700,694
STORM SASH FASTENER.	E. C. Quimby, Minneapolis, Minn.	May 20	700,706
SASH BALANCE.	Pockop & Corbin, New Britain, Conn.	May 27	700,814
SASH FASTENER.	R. Williams, Malvern, S. Australia.	May 27	701,238

HEATING AND VENTILATION.

AUTOMATIC VENTILATING WINDOW LOCK.	W. C. Martin, Newton, Mass.	May 6	699,204
CHIMNEY COWL OR VENTILATOR.	M. Schwartz, New York, N. Y.	May 20	700,568

PLUMBING.

FAUCETS.	F. F. Field, Providence, R. I.	May 6	699,377
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TOOLS.

FLOORING GAGE.	W. W. Crin, Pekin, Ind.	May 13	699,664
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TO REMOVE GREASE SPOTS FROM MATTING.

GREASE spots may be removed from matting with a thin paste of fuller's earth and cold water. Spread quickly over the spots, and cover with a pasteboard box or something that will not allow the paste to be disturbed. When it is thoroughly dry brush it off, and the unsightly spot will have disappeared. Unpainted floors, says a contemporary, may be treated in the same way to remove grease.

Publishers' Department

ACETYLENE GAS INDUSTRY.

THE use of acetylene as an illuminant is increasing rapidly. Many prospective users are deterred in placing a machine in a house owing to a fear of its explosive qualities. But this prejudice is being dispelled, as it is found that machines made for the manufacture of this gas from calcium carbide are closely watched by the National Board of Fire Underwriters and thoroughly tested for safety. At first it was thought that a simple machine was all that was needed to make acetylene, and consequently many tinkers and tinsmiths devised apparatus for extracting

it is desirable, the bedroom suite may be left open and merely a bureau drawer protected. This protection is such that any attempt to open it, drill it, or smash it open, by however great an expert, can only result in sounding an alarm in the dining-room, bedroom, or wheresoever the lady of the house may wish. Closets may be made as thief proof as a bank vault and at a trifling expense. On entering a bathroom, provided even as some are with three doors, pressing one button locks all three doors silently against outside intrusion only. Opening any one door from within silently unlocks the others. A business man desiring privacy during a telephone call, presses a button on his desk, and all doors entering his office are locked against outside intrusion, but open readily by turning the inside knob. When the call is finished, pressing another button on the desk unlocks the doors again. The daughters of a household are at an evening party. On returning home with their escorts they give a prearranged signal on the door bell button. The mother awakens, knowing the signal, merely presses a button at her bedside. Instantly a buzzer sounds at the door, telling the young ladies that they may enter by merely turning the knob, and the moment they do so a buzzer in the mother's room tells her that they have opened the door; a door closer then closes the door, automatically and it deadlocks itself.

This is indeed an age of luxury and practical life.

These locks and many others are the invention of Henry Guy Carleton, and are covered by many United States and foreign patents. They are manufactured and sold by the Carleton Electric Company, whose offices are at 220 Broadway, New York City, New York.

WITHOUT A BRUSH.

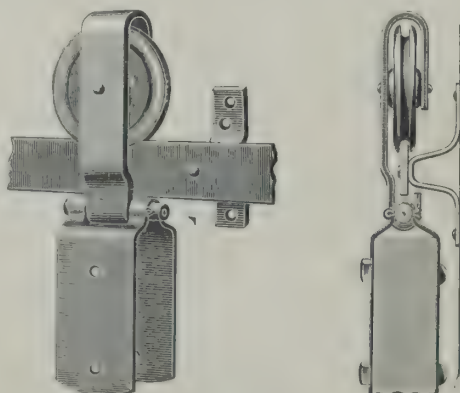
A MACHINE of marked simplicity, and destined in a great degree to supersede the paint brush for certain large work, is manufactured by the Patton Paint Company, of Milwaukee. It weighs only twenty-five pounds, has no complicated parts to get out of order, and no experience is required to use it successfully. It is equally adapted to exterior or interior painting, to whitewashing or to the application of shingle stains. With the twenty-five feet of hose and seven-foot nozzle pipe, which accompany each machine, any part of a building may be reached. The effectiveness of the device is shown in the fact that with a Patton Aereo Painter two men will average twenty thousand square feet in a day, whereas with the brush two men will not cover four thousand feet in the same time, using an equal amount of paint per square foot. On the arrival of this, the first practical painting and whitewashing device, the art of distributing the material undergoes a revolutionary process, for the amount required is no more than when applied by the brush, the task less arduous, and the saving of time and labor is remarkable.



PAINTING WITHOUT A BRUSH.

A NEW HINGED BARN DOOR HANGER.

THE illustrations in this article are of a new type of barn, factory, or warehouse door hanger. It is just being put on sale as a distinct improvement on the old kind of hangers, in having a hinged joint, for which feature there are indications of a considerable and growing demand. Attention is called to a few

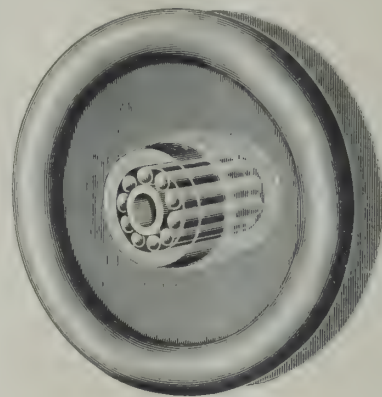


FRONT VIEW OF HANGER.

END VIEW.

special points of the hinged hanger, such as the all-steel frame, the special roller bearings with bushing, and particularly to the fact that the hanger is made in two parts, which are detachable. This construction allows one part to be secured to the door and the other

to be placed on the rail separately; then when the door is brought into position, the hinge bolt is inserted, thus joining the two parts. When these two sections of the hanger are connected it can not get off the rail except at the end, yet if the lower part is removed the hanger can be taken off the track anywhere throughout its length. In this device there is a certain amount of flexibility at the top of the door even if it is held from swinging out at the bottom, and a slight warping of the door will be compensated for by the hanger. The wheel is supplied with the



ROLLER BEARINGS.

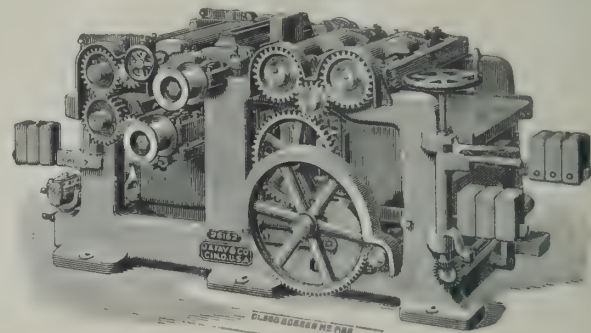
regular Lane roller bearings, in which a number of rollers revolve about a bushing, the bushing itself being solidly clamped between the two sides of the hanger frame. The hanger is adapted for regular 1½ inch O. N. T. rail. It may also be used on narrower rail, in which case it will not be positively tied on the track. The Lane Brothers Co., of Poughkeepsie, N. Y., makers of the famous O. N. T. rail, and many hardware specialties, are the manufacturers of this novel and improved hanger.

SILICA-GRAPHITE PAINT

THE ability of the American engineer to design steel structures of great strength and pleasing architectural effect, is shown in the eight illustrations printed on the handsome souvenir mailing card issued by the Joseph Dixon Crucible Company, of Jersey City, N. J. The card is an instructive and artistic bit of advertising on the part of the company, and should prove of decided interest to constructing engineers and architects, to whom it will be sent on request. Dixon's Silica-Graphite Paint, which thoroughly and economically protects steel structures from corrosion, has been extensively used in the South, West, and sea-coast sections of the United States; also in Mexico, the West Indies, Australia, the Philippine Islands, China, Japan, etc., and has demonstrated its protective and wearing qualities in all climatic conditions.

PLANERS AND SMOOTHERS.

IN the illustration we show a double-cylinder smoothing planer, built for general surfacing. It is designed for an extensive class of work, and is good for all wood-working shops, mills and factories. It is made to plane 26 to 42 inches wide and to 6 inches thick. The table is raised and lowered on ball-bearings, easily controlled



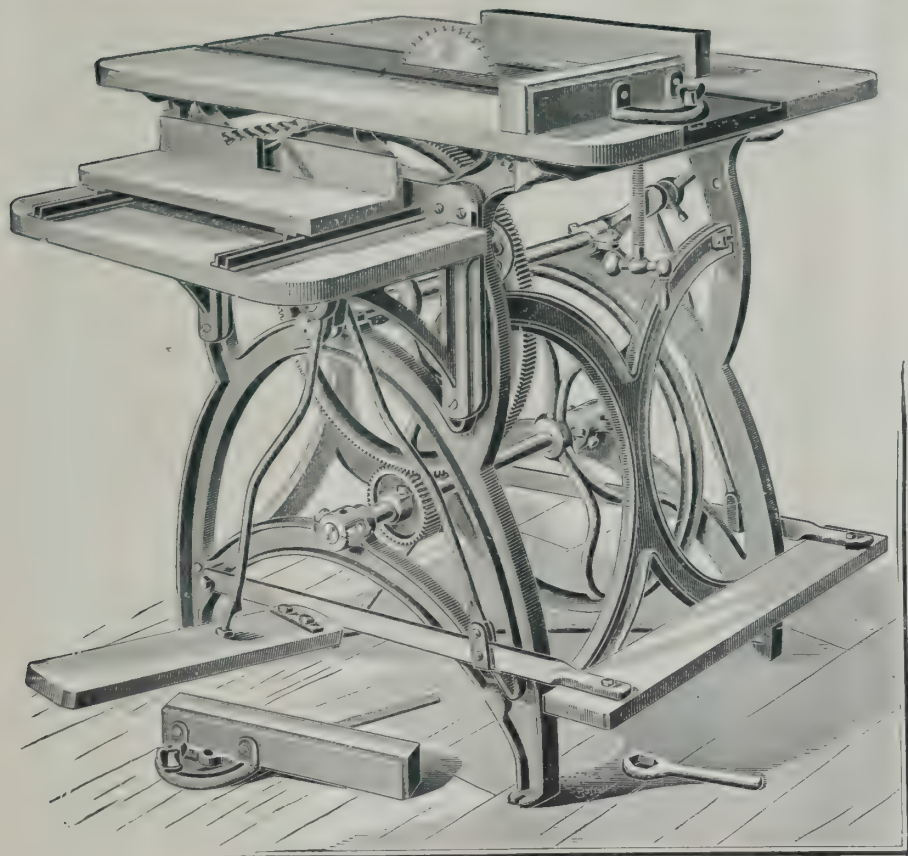
No. 20 DOUBLE CYLINDER PLANNER.

by a handwheel convenient to the operator, and is quickly adjustable for different thicknesses. The machine has six powerfully driven feed rolls, four of which are placed before the cutting cylinders and the other two behind them, so that each piece of material is fed clear of the cutters. The patent upper feeding-rolls are center-gear with gear driven downward, while all the upper rolls have sectional weights for nicely regulating the pressure. The upper feeding-out roll raises parallel for varying thicknesses. The variable feed is so reliable, simple in construction and efficient in operation that it is always under the ready control of the operator, changing from slow to fast, or vice versa, while the machine is running. The lower cylinder and receiving plate may be driven out for sharpening the knives, and provision is made for insuring uniform thickness in surfacing thin lumber. The machine may be fitted with a sectional pressure bar for feeding several narrow pieces of uneven thickness at the same time. The makers, J. A. Fay & Egan Co., of 209 to 229 West Front Street, Cincinnati, Ohio, will send particulars, terms, and cuts on request.

LUXURY IN LOCKS.

PEOPLE nowadays have so many things to do that any device which may save labor is hailed with delight and approval. Luxury in locks is the latest. Instead of the housewife pottering about, candle in hand, locking this, bolting that, or securing the other, our modern lady turns a tiny switch at her bedside, and lo! all windows and doors through which thieves can gain access to the bedroom suite, the drawing-room, or silver closets, are locked and the slightest attempt to break in gives an alarm at any desired point. Also, when going to dinner (the chosen hour of sneak thieves), she merely closes the doors of her bedroom suite and turns a switch. The moment she steps into the hall and closes that door, the suite is thief proof, and any attempt to enter sounds an alarm in the dining-room. Even collusion with servants will not avail a trespasser. The windows are also inaccessible, though open top and bottom for air. Or if

MARSTONS' HAND & FOOT POWER CIRCULAR SAW.



Iron Frame, 36 inches high.

CENTRE PART OF TOP IS MADE OF IRON ACCURATELY PLANED, with grooves on each side of saw for gauges to slide in.

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is quite enough for some people, but most people want water every day. If

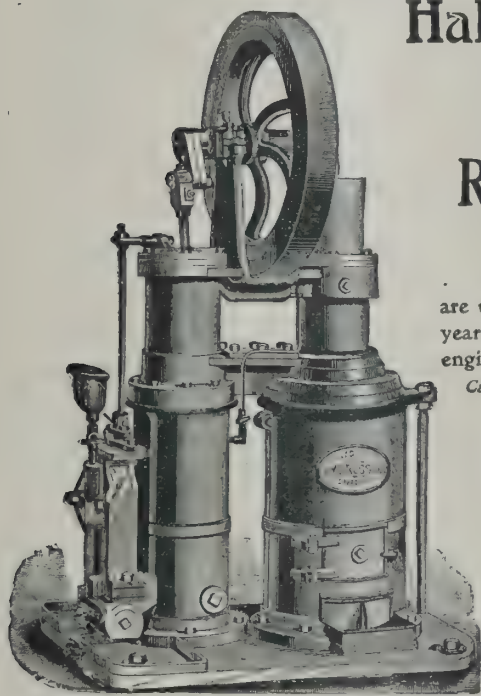
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are used you can have water every day in the year, and your cook or stable boy is the only engineer needed. 25,000 in daily use.

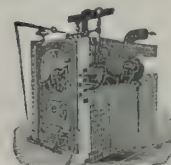
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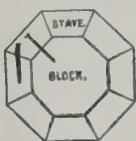
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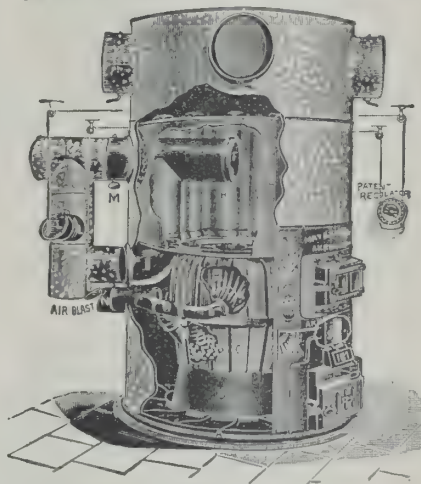
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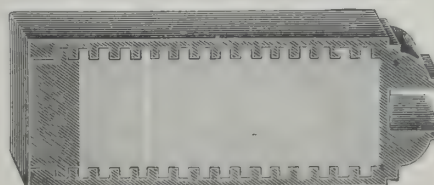
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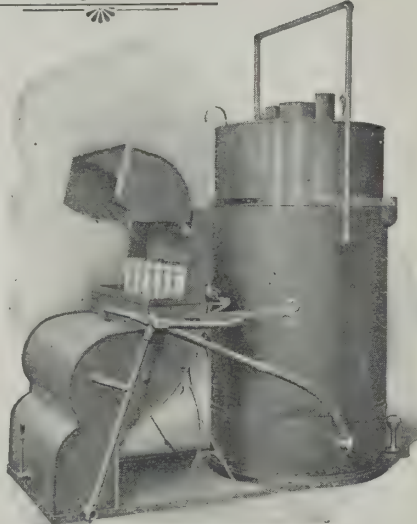
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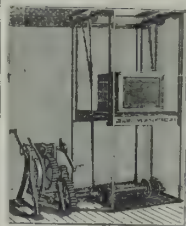
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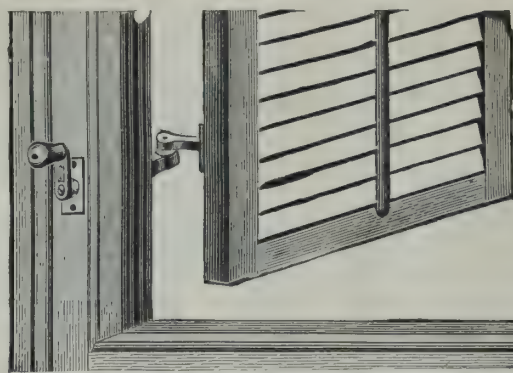
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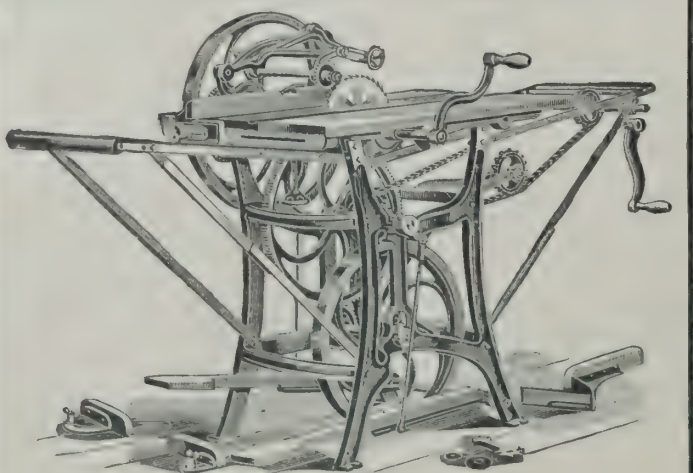
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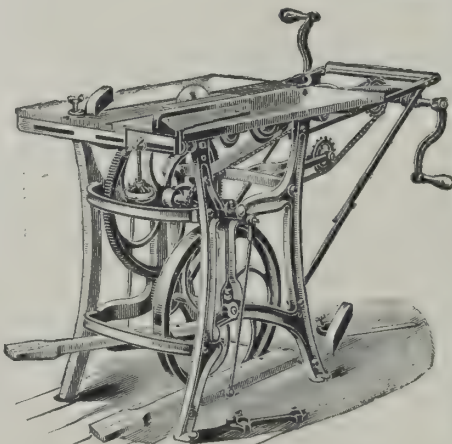
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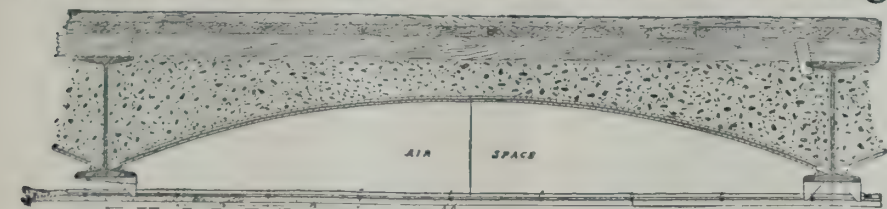
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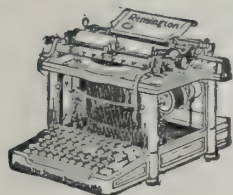


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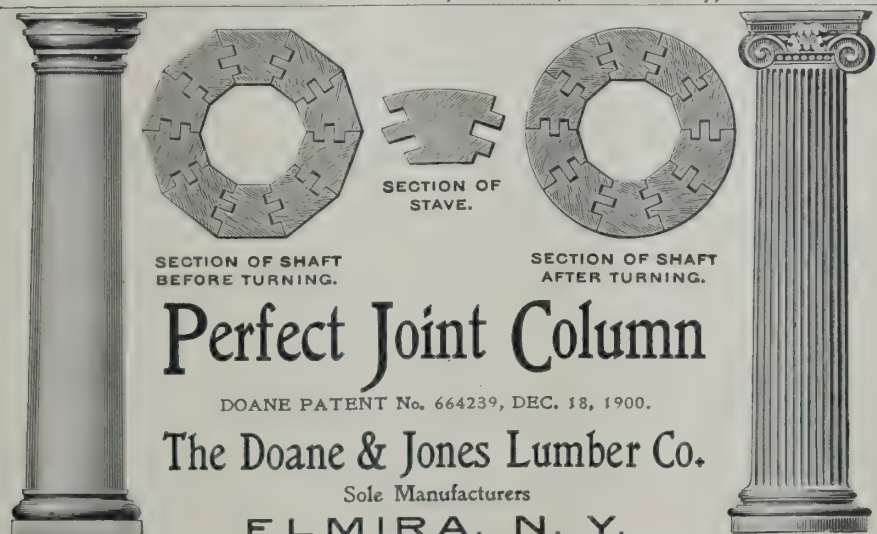
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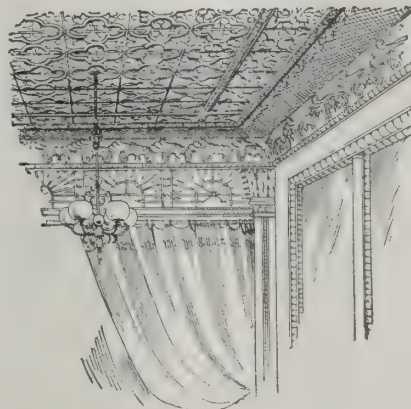
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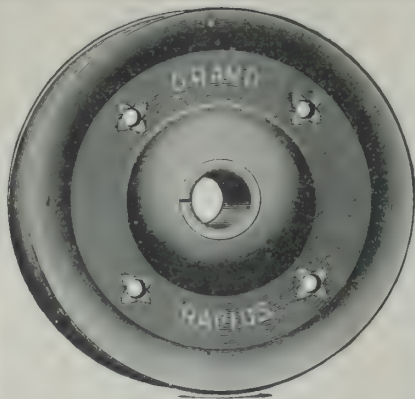
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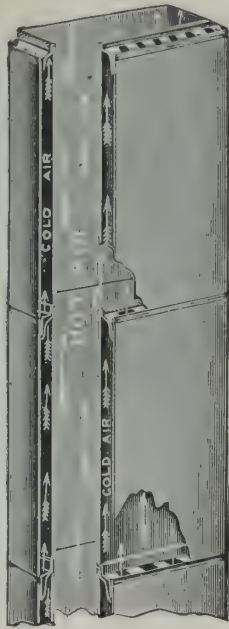
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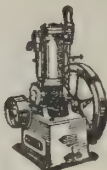
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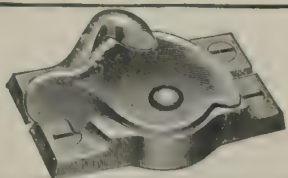
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sash of windows may be raised or lowered.
When the switch is open, the outside knob is locked, so no one can enter from
the halls, and a quarter turn of the knob will sound an alarm at your bedside
or where you may desire. Also all windows are locked, though open top and bottom for
air, and any attempt to raise one will sound an alarm. Yet you can enter your own bedroom,
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though wires be cut, for they open from within mechanically.

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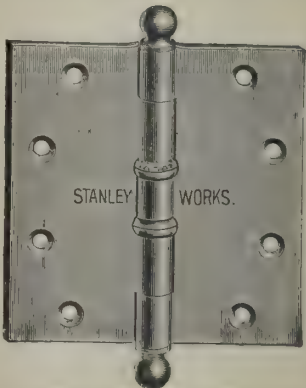
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THE LEIBNITZ HOUSE IN HANOVER, GERMANY.—See page 22.

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MONTHLY COMMENT.

THAT the billboard with its flaring advertisements is bound to go is one of the good signs of the times. It is going slowly, much too slowly for the good of the communities in which it has flourished, but its end seems to be in sight. City after city has pronounced against it, and adopted some rules to regulate it. There is much to be done yet, but any progress is some progress, and the first attempts at regulation are the first steps toward extinction. The billboard adds variety to our dull streets, it affords amusement for country folk visiting the city, it interests the small child, and it is an aggressive nuisance, thrusting its coarse colors into undeserved notice, and demanding an attention to which it is not entitled. The cities are better without it, the countryside cleaner, fresher, purer. Let the good work of extinction go on and go on merrily and successfully.

HARMONY is the true measure of success in all interior work. The successful room is not one in which everything is of the same color or the same order of colors, but it is one in which an harmonious effect is produced by the combination and arrangement of all the objects within it. One can not have an agreeable room unless it is fitted and furnished in an agreeable way. And everything must fit into a place in the entire scheme. One does not need costly furniture to produce a good room, but one does need good taste and an eye that appreciates the harmonious combination of many different objects.

A RATHER absurd attempt to justify the beauty of the sky line of New York was made some time ago by a weekly paper, which published a photograph of the metropolis and buttressed it with views of Milan Cathedral, the British Houses of Parliament, and the Matterhorn. There is variety for you, the sheet exclaimed. See those broken tops, those many towers, actually more diversified than New York with its towering high buildings! It is not often that anything so ridiculous as this is served up to people of intelligence as the readers of the sheet in question presumably are. The Cathedral of Milan and the Houses of Parliament are single structures, and their varied outlines are the re-

sult of serious studies for single buildings. The varied sky line of New York is an accidental result, obtained without thought of unity, the many parts having absolutely no relationship with each other. Fortunately, it is so exceedingly fine, so wonderfully impressive, so richly varied, and so wonderful in its effect that it needs no defense and requires no argument. It is a natural growth, and it is one of the grandest sights in America.

MAKING grass grow is a difficult and sometimes tiresome operation. Yet it ought to be easy, for grass grows almost everywhere, and its very abundance is proof of its inherent productiveness. It is the saving element in nature, the general transformer. It makes unpleasant places pleasant, and covers the earth with a gentle blanket of the purest color and most delicate texture. And yet, while the making of a lawn is a matter of some trouble, the very least a man can do to his house is to surround it with grass. If he has neither the time nor the taste to raise flowers, he might at least cover his barren land with grass. It is true, indeed, as a Boston contemporary points out, that if the man who makes two blades of grass grow where one grew before is a public benefactor, how much more is he a good citizen who makes the two blades of grass grow in what would otherwise be a barren and unattractive waste!

WALLS AND WALL TREATMENT.

THE mechanical process of wall-making is very simple. The art of wall designing is very difficult and complex. And herein is the difference between art and construction, between doing a thing because it must be done and doing it because it is a pleasure and something intended to give pleasure. A wall may be built and a wall may be designed. The two processes are wholly distinct, wholly different, wholly unlike in their results. The one is a mechanical action, the other is an artistic creation. And the wall is a failure or a success according to the method used.

It is not an easy thing to create a work of art. Every operation that requires thought, that demands consideration, that necessitates study, is a work of difficulty requiring the consumption of the rarest and most costly commodity in the world. If the thought is well expended, if it is applied intelligently and used skillfully, the result will repay what it has cost. If it is badly applied and unwisely used, it will cost more than the money value in the first instance.

A wall, in itself, may not seem a work of art, and yet the best walls that have ever been built are just exactly that and nothing else. Technically, a wall is an enclosing structure. Practically it is a structure to hold windows and doors. Artistically it is the most important part of the building. Take a few of the things a wall does, and note how important is the place it fills in the design.

The wall gives color to the house, for its prevailing hue determines the tone of the whole structure. The wall gives quality. The quality of a stone wall differs from that of a brick wall; a marble wall has certain inherent qualities that a wall of wood can never make evident. The wall has texture. A smooth wall differs from a rough wall; a painted wall is unlike a plastered wall. The wall has form. Its thickness may be more or less apparent; its material is necessarily visible. If it is plain and severe it occupies a different place in the design than it does when its surface is broken up with ornamentation or cut off with bands of ornament.

Look at the matter in another way. Let us assume the house has an underpinning of rough stone. This is succeeded with a story in brick or in dressed stone. On top of that is a floor of wood or of shingles. It hardly matters what comes higher up. We already have three different materials in our wall. There is eminent variety here, and a great deal of it. There certainly is nothing quiet or subdued, restful, or enjoyable.

Take the wall in plan. A firm, clear, strong line in building, whether it be horizontal or vertical, is of quite as much beauty as the firm stroke of a brush in drawing. A plain, straight, unbroken wall has some elements of beauty and restfulness that a more varied structure can not begin to offer. But now break the wall up, throw out a buttress, or a bow window, or a strange little freaky ornament; swell the wall out with a great bow; recess it with indentations; variety results, it is true, but the value of these things will not depend on their variety, but on their relationship to the whole design.

A plain wall is a very safe thing. A richly decorated one contains all sorts of pitfalls, dangers and traps for the designer. A skilful artist will design a decorated wall that can be a work of art; a less competent man may put on more detail and fail more conspicuously. A very common mistake in wall designing is to do as much as one can; the wiser rule is to do as little.

There is no mystery in success in wall design. It simply needs to be considered as a most important part in the design of the structure, and success will not be far off. The mistakes that have been made in this

connection arise from indifference or from neglect. Too often a wall is considered as so much filling, an unavoidable necessary part of the structure in which all the art is lavished on detail or ornamentation. A neglected wall is a neglected opportunity, and if the wall fails it does so because it has been neglected and not thought to be of sufficient account to be thought of.

Successful architecture of any kind is a speaking art, in which every part speaks for itself and for the whole. A great big building needs to be designed on a great big style. In a small building the various parts must be subordinated and harmonized to the small scale of the structure. And every part, whether windows or doors, ornaments or chimneys, porches, porticoes, balconies, railings, and walls, should speak of the skill and care of the designer.

And the wall is the setting of the house. Its material determines the character of the building. As it is good or bad, indifferent or hopeless, so will the whole structure be. It must not only be well built, but it must be well designed. The kind of wall it is, its make, form, substance, quality, all these count in the completed result. It is more than the background, it is the building itself. In no sense at all is it the canvas on which the architect arranges his openings, and to which he attaches his ornament. Openings and windows count, and count for a very great deal, but they count the more if the wall has been well considered and if it implies thought, as all the parts of a well-designed building should do.

It is a most mistaken notion to imagine that a wall can be left to itself; to think that the process of design is a mere arrangement of openings; that a house structure is a combination of voids and solids, in which the voids need more care than the solids, for they can be piled up by the mason or the carpenter and do as fillings in. No work of art was ever produced by such a process, and no work of art will ever be made in such a manner. The wall must be designed, thought of, and studied quite as much as any other feature of the building. Questions of its material, color, substance, treatment, must be passed in review, and the best solution chosen that meets all the requirements of the problem. Nothing must be left to chance. The wall that is suited to one building will not be available for another. The wall that rises naturally from one foundation or which fits into one site will not necessarily be the best thing for another foundation or for another situation. As in every other part of house designing, if the utmost success is to be obtained it must come through individuality. The wall need not assert itself, but it can never be inconspicuous.

There is one common remedy for all brick and stone walls that hides a multitude of sins, sometimes, and that is to cover it with vines. The beauty of a vine covered wall often comes from the fact that it covers a hideous construction. Our American winters will often reveal unknown horrors in wall designing that had not been dreamed of. But a well built house—which is also a well designed house—needs no covering of this kind. Use vines if you will, and they are often exceedingly beautiful, but best of all build walls so well, so good and true, so ornamental and so refined, that they can always speak for themselves, and always give testimony to the thought bestowed upon them.

THE LEIBNITZ HOUSE IN HANOVER.

OUR illustration shows the four lower stories of a magnificent burger dwelling built about the middle of the seventeenth century. Particularly noteworthy and attractive is the three-story bay window, whose beautiful sculpture reaches from its base to the top of its gable, and whose statuary embellishment surpasses that usually found on houses of the time.

In 1844 the Government purchased this building, and in 1892 it was completely restored by Professor A. Haupt. To-day it is faultless in its figurative ornamentation, color, gilding, and other accessory decorations.

When the interior was renovated, every precaution was taken to preserve the original form.

The Leibnitz Museum is a masterpiece of architecture of the year 1652, and with just pride could the renovator sanction the inscription of the master above the doorway: "Posteritati."

The baroque style, the almost exclusively used elongated snail-like endings of the bands and tiges, and the extravagant employment of cherubs' heads, might be open to criticism. The Gothic medallion friezes on the fourth story, as well as the interior of the building, are legacies from the year 1499. This clay frieze contains escutcheons and figures of saints surrounded by ornamental foliage. And although not generally known, it is a medieval sculptured work of the first class. The use made of this frieze in the year 1652 shows us how buildings should be restored.

From the large windows, which contrary to the usual custom are not placed adjacent to one another, the slender and often amazingly overlaid pillars stand out—a characteristic mark of Hanoverian renaissance architecture.—Blätter für Architektur und Kunst-handwerk.

TALKS WITH ARCHITECTS

MR. FREDERICK S. LAMB ON MUNICIPAL ART.

THAT municipal art is one of the most important public questions of the day is a fact with which the readers of the *BUILDING MONTHLY* are entirely familiar. That it does not mean public paintings or noble monuments, but directly relates to the whole question of environment has been referred to more than once in these pages. Municipal art aims, in fact, not so much at art decoration of a public character, but at the general betterment of the locality. It is a good sign of the times that the fundamental truth of town and city making, the better the general surroundings the better the homes and the better the lives of the people, is now recognized by all thoughtful people.

Mr. Frederick S. Lamb is one of the leaders of this movement in New York, and as secretary of the Municipal Art Society of New York has reestablished that organization on a permanent foundation. A former vice-president of the Architectural League of New York, member of the Fine Arts Federation, trustee of the American Scenic and Historic Preservation Society, active in the National Society of Mural Painters, the National Sculpture Society, the National

for there the possibility of repetition is so much greater. For example, a municipality rarely requires a single lamp post, but will order them by the thousand. A good design for a single lamp may represent quite a large expenditure, but when they are ordered by the thousand the cost per lamp is hardly greater for a good design than for a poor one, while the art quality is infinitely greater.

"The second elemental proposition is that cities should receive more than they do from public and semi-public corporations. If contracts were drawn and necessary provisions made in them the city could obtain from all corporations obtaining public franchises and city privileges excellent designs in street fixtures rather than the commonplace structures now so generally accepted. The general design or excellence of the new subway stations in New York could, for instance, have been stipulated in advance. It could have been possible, in the same undertaking, to have made it conditional that all trees along the prescribed routes be retained and not injured. The docks could have been made simple and interesting instead of commonplace, as they regrettably are. Even signs could have been regulated and many other apparent betterments insisted on at no additional cost to the

"As to the source from which such schemes may be obtained, it is only necessary to refer to the example of Washington, where a commission has recently brought forward a plan for most sumptuous public improvement, which is not only fine in itself, but which has the additional and superlative merit of being simply an amplification of the original plan of Washington devised by L'Enfant. The situation is by no means hopeless when such possibilities can be pointed out by competent authorities in relation to a single city.

"The agencies at work in these matters are twofold: those working along sociological lines and those engaged in artistic undertakings. Both are of value, and while each has its distinctive character, both are working toward a common end. The sociological agencies have already produced better school buildings, structures with playgrounds on their roofs, buildings used at night for lectures, and in summer for recreation; they have made improved tenements popular, and they have furthered the agitation for public baths. The artistic agencies preempt another field of activity. They look toward a more comprehensive city plan; they seek for an intelligent adjustment of the transit problem, they ask for the



ENTRANCE DOOR, A RESIDENCE AT BRYN MAWR, PA.—See page 37.

Arts Club, and secretary of the second Palisade Commission which obtained the passage of the bills which created the present Palisade Park, Mr. Lamb has been a most conspicuous figure in the art world of New York for the last fifteen years or more. Few men have accomplished so much, and few have labored so unselfishly for the good of the community in which they live, and for the furtherance of the profession of which he is a member. Mr. Lamb is not an architect, but a decorative painter, yet his zeal for architecture and the enormous amount of stimulating and valuable work he has accomplished render anything he might say on the subjects in which he is interested of special interest to the readers of this series of conversations.

This was not the first time Mr. Lamb and I have discussed questions relating to artistic subjects, but it seemed best that we should confine ourselves, for the time being, to general principles.

"In considering municipal art in a general way," he said, "it is well to remember there are three fundamental propositions from which the subject is now generally approached. The first of these is that cities should get more for their money. The advocates of municipal art do not ask for greater expenditure, but they do ask, and they ask it under all circumstances, that public expenditures be more intelligent than they generally are. Good design does not necessarily mean greater expense in either public or private art, and especially it does not mean it in public art,

city, but to its very great improvement in general appearance.

"The third basic principle relates to private ownership. If we had intelligent suggestion, cities could obtain from private owners cooperation in favor of a more consistent treatment of such features as affect the public eye. Some steps in this direction have already been done in a minor way by private enterprise, and has produced practical results in such successful experiments as the so-called 'Blocks Beautiful' in Brooklyn and elsewhere, in which a number of persons living in the same block have adopted a uniform or harmonious system of house decoration with plants, flowers and vines. The same idea had further illustration in a Brooklyn street, which was paved with various sorts of materials, cobble stone, macadam, Belgian blocks, etc. By united action the whole thoroughfare was repaved and the center treated as a parkway—an operation that cost very little and which was only possible by united action on the part of a considerable number of property owners.

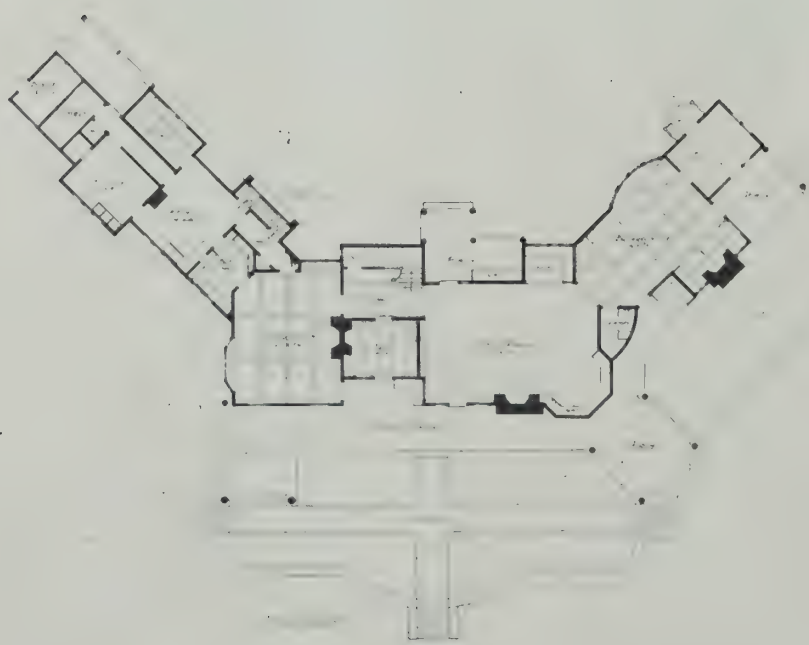
"The fact is, if city officials would lay out in advance the general lines on which public improvements were to be carried on it would be possible to influence private gifts such as statues, memorial tablets and the like in such a way that they would be in accord with a general scheme. Instead of such public gifts being indiscriminate and haphazard, as they frequently now are, they would be greatly enhanced in value in taking a definite place in some general program.

creation of parks and for the beautification of streets and highways. I speak only of some of the more manifest aims of both groups, for special interests are constantly arising, interesting new people in new fields of activity, or diverting the attention of established agencies toward fresh undertakings.

"The question is of the utmost importance to the architects, for no body of men can do more than they to add to the general improvement of the appearance of a city by the simple process of improving the quality of the buildings built upon our streets. While commercial buildings are restricted externally by their purpose, there are other city buildings, as churches, which are not so restricted and which should be made more beautiful than they are.

"While the rapid growth of cities is an apparent handicap to esthetic development, as a matter of fact it often affords opportunities to do things which under other conditions would be impossible. The rapid growth of New York for example, has necessitated more bridges, which should be great public monuments, and in the near future will necessitate the adoption of the arcade or passage with its artistic possibilities as an integral feature of our street architecture. Old sections apparently beyond the hope of revision are being brought within the scope of modern progress, and fresh opportunities are constantly arising for the furtherance of municipal art."

BARR FERREE.



"GREEN GABLES," COHASSET, MASS.—See page 36.

MESSRS. CHAPMAN & FRAZER, ARCHITECTS.





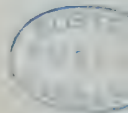
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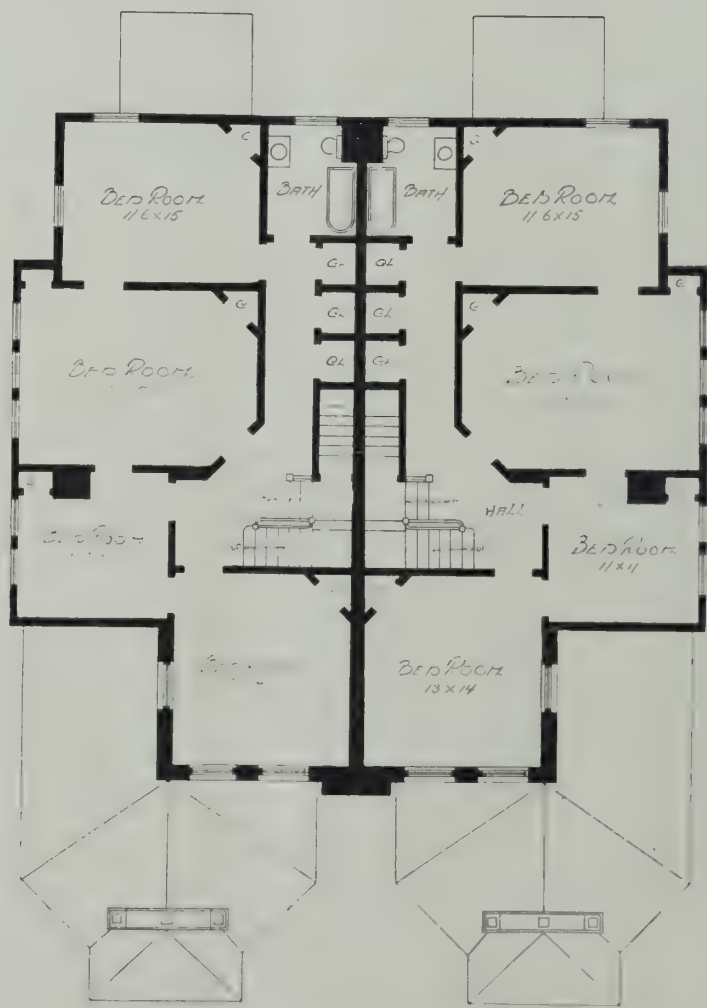


DINING-ROOM.

"GREEN GABLES," COHASSET, MASS.—See page 36.

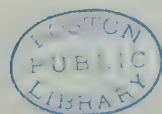
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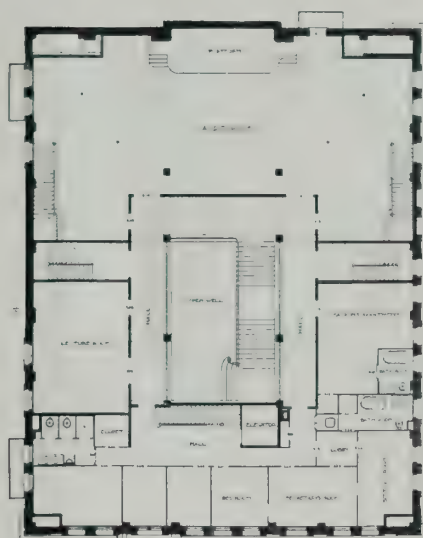




A PAIR OF HOUSES AT GLENSIDE FARMS, PA.—See page 38.

MR. CHARLES BARTON KEEN, ARCHITECT.

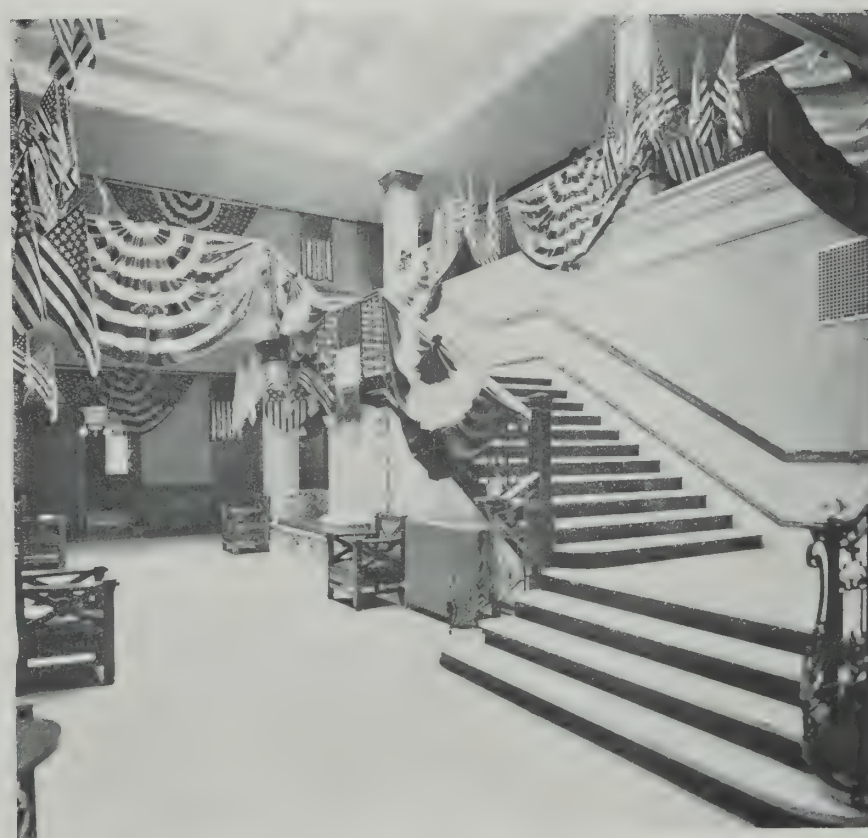




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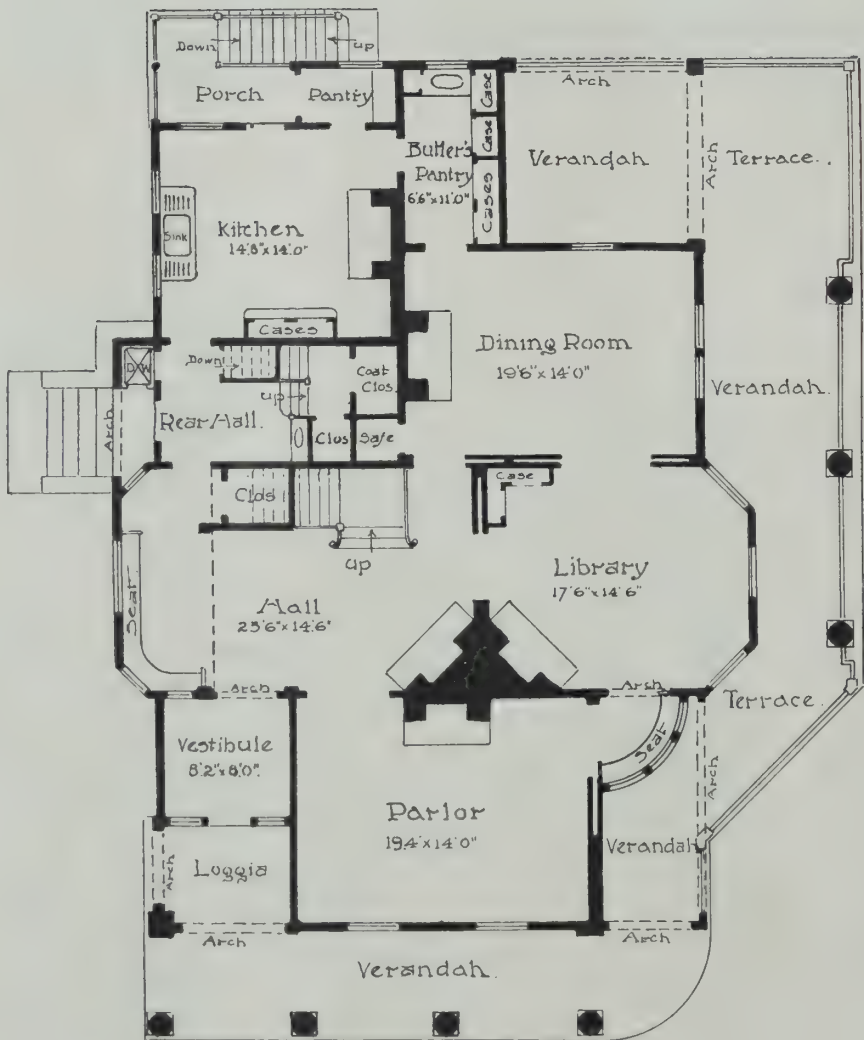


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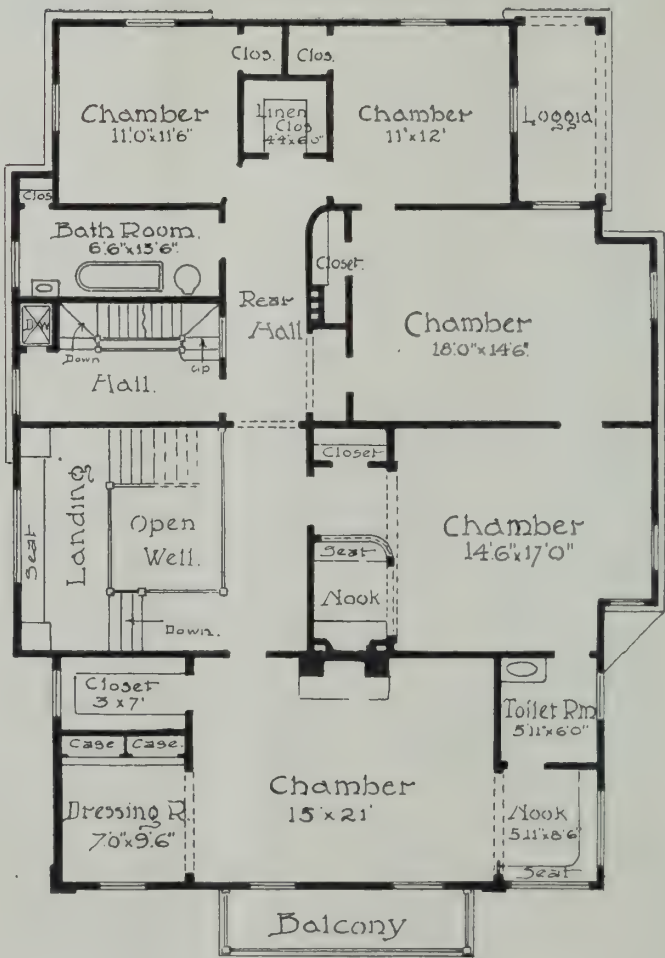


THE NAVAL BRANCH BUILDING OF THE Y. M. C. A., BROOKLYN, N. Y.—See page 39.

MESSRS. PARRISH & SCHROEDER, ARCHITECTS.

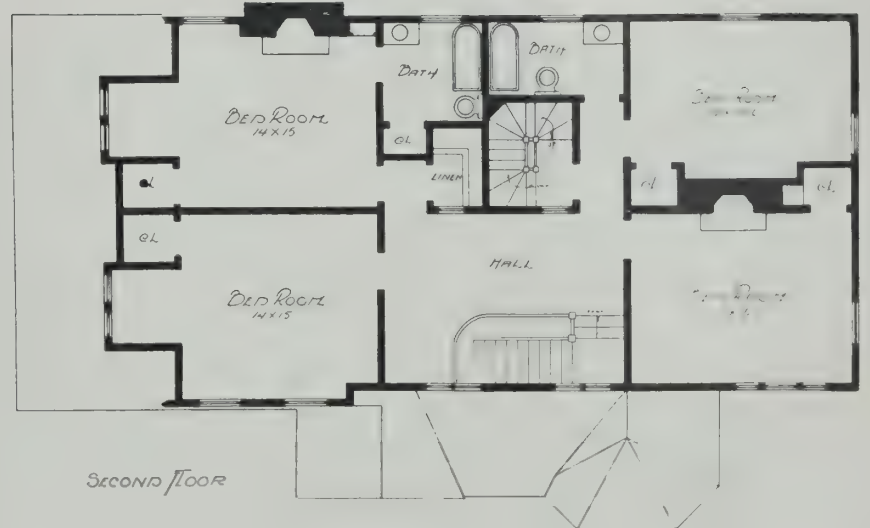
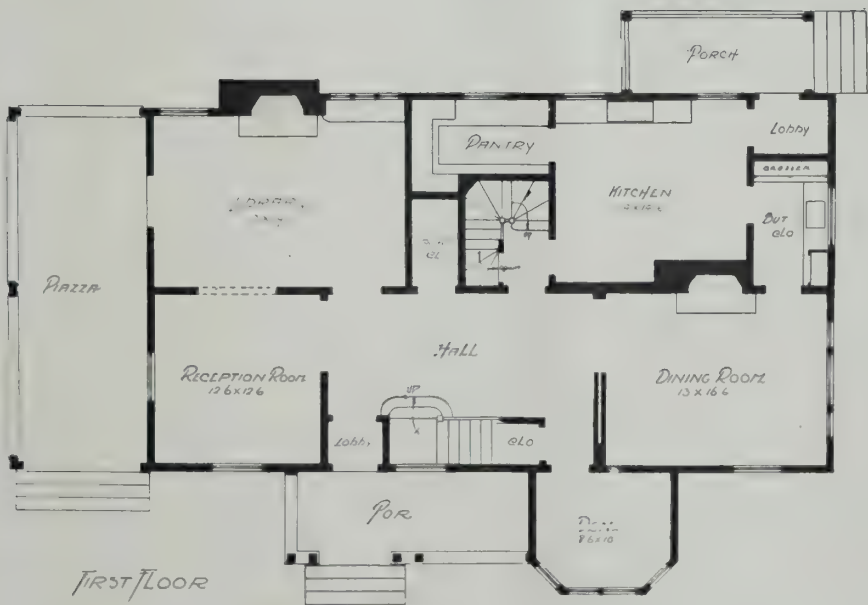


FIRST FLOOR PLAN.



SECOND FLOOR PLAN.





A RESIDENCE AT CHESTNUT HILL, MASS.—See page 38.
MR. H. S. FRAZER, ARCHITECT.



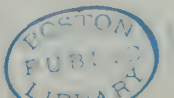


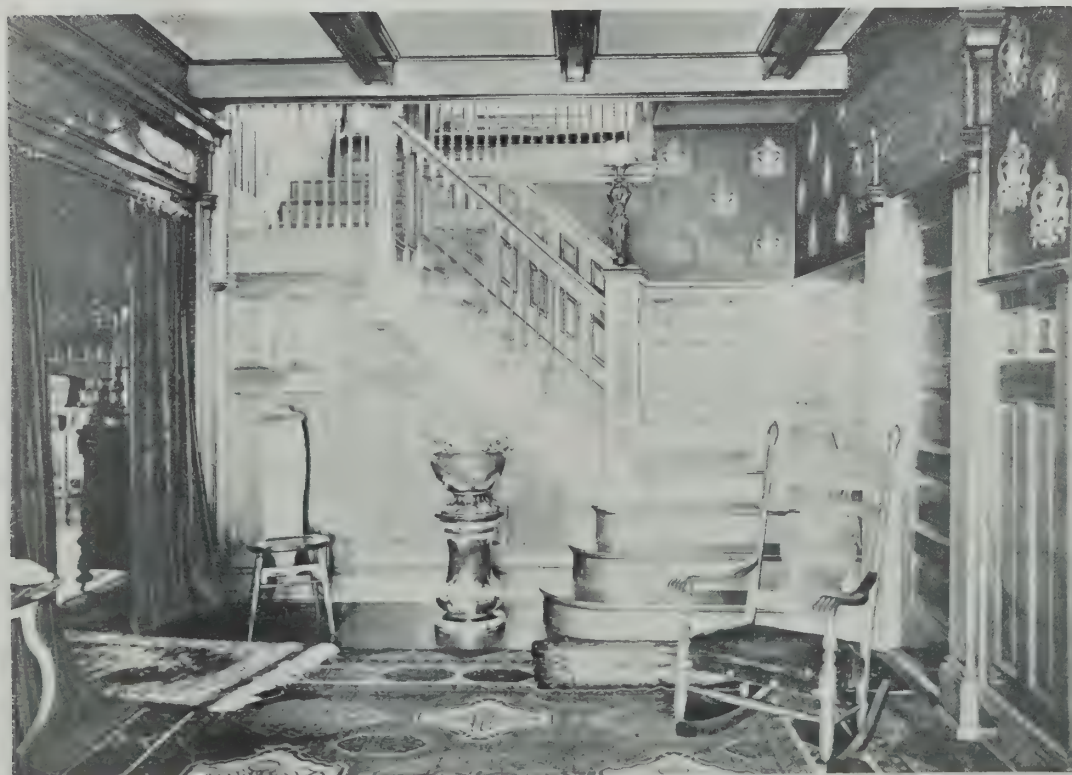
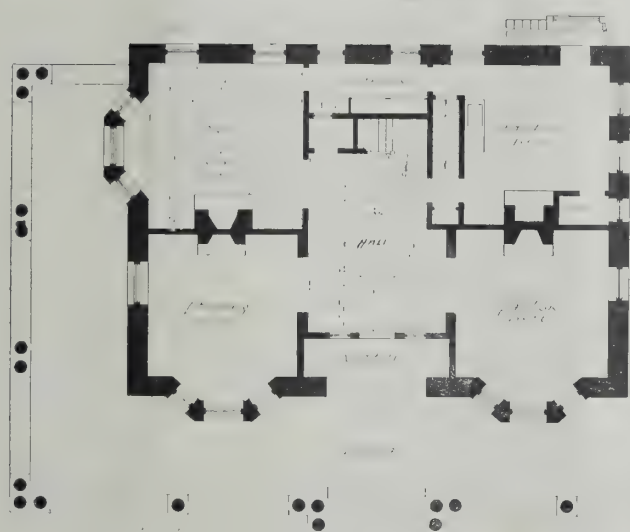
SECOND FLOOR



FIRST FLOOR

A SUMMER COTTAGE AT WOODMONT-ON-THE-SOUND, CONN.—See page 36.





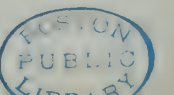
A RESIDENCE AT GREENWICH, CONN.—See page 38.

MR. FREDERICK G. C. SMITH, ARCHITECT.



A RESIDENCE AT BRYN MAWR, PA.—See page 37.

MR. WILLIAM L. PRICE, ARCHITECT.





A RESIDENCE AT BRYN MAWR, PA.—See page 37.

MR. WILLIAM L. PRICE, ARCHITECT.

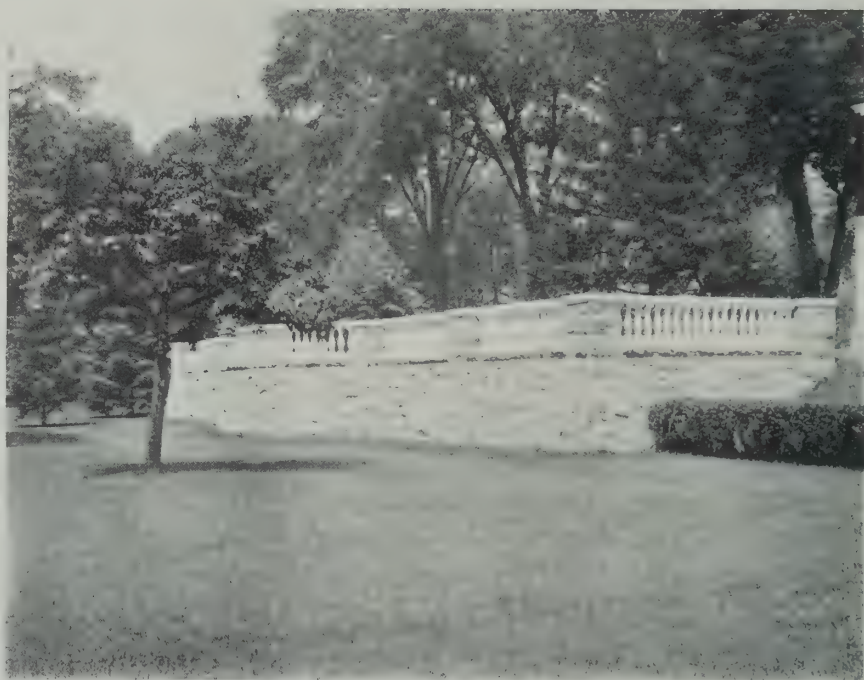




A CLASSIC SUMMER-HOUSE.



GARDEN STEPS.



THE TERRACE.



FORMAL GARDEN OF FRANK H. DAVIS, ESQ., AT ELIZABETH, N. J.—See page 37.

MR. C. P. H. GILBERT, ARCHITECT.





BAY WINDOW AND GABLE ENDS AT "GREEN GABLES," COHASSET, MASS.—See page 36.

MESSRS. CHAPMAN & FRAZER, ARCHITECTS.



The Household

A RAINY-DAY CLOSET.

A RAINY-DAY closet is a device intended for the alleviation of the care of mothers. In it are placed toys to be mended, games from which the interest has temporarily departed, pictures to be cut out and pasted in scrap books, specimens of rocks to be classified, a book of conundrums, one on familiar science, from which easy experiments could be taken for trial, a charade book, story books (new and old, for all ages), crêpe paper for making flowers, sheets of old calendars, from whose first thirteen figures the game of Numerical Patience could be made, pictures of persons and places mounted on cardboard, and intended specially for the convalescent ward in the children's hospital; sewing, knitting, and crocheting materials; stamps to be pasted, materials for kite-making, in a word, anything. A list of the articles and shelf where each was to be found was placed on the inside of the door, and a custodian, generally the oldest daughter, appointed, who saw to it that the article chosen was delivered to the child choosing it. The door was kept locked at all other times. No one was allowed to ask for anything different under an hour, although articles could be amicably interchanged.

HOUSEWORK AND ATHLETICS.

THE newest fad in household economics is that housework is a form of athletic exercise. Many a tired houseworker knows how true this is; but if it is no longer work but "exercise," perhaps the toil will be lightened. It is true enough, as the New York Sun points out, that when you come right down to the subject, there is no work in the world in which there is more variety than in general housework. Furthermore, it is the most healthful sort of work, although it can be so done as to prove anything but a blessing physically. If one stoops toward it, so to speak, with contracted chest and drooping shoulders, it will only be a question of time when the head will droop and the shoulder blades stand out. If one habitually does all the heavier work with one hand, the result will be a one-sided development.

Since almost all of the regular housework is of such a sort as to require forward motion of the arms, the thing to guard against is contraction of the chest. Sweeping and dusting become good exercise when proper attention is given to the position of the body. The sweeping not only starts the circulation and increases respiration, but it also gives some good arm and waist exercise. Bed making is good exercise when the windows are open to admit plenty of fresh air. A great deal of bending is necessary, but this alternates with straightening of the body. No one position is held for any length of time, side motions of the trunk and arms being necessary. There is free play for the chest, the lungs are filled with fresh air, and the general circulation is quickened in this brisk work. But, as in every other detail of housework, the clothing should be such as to give no pressure or undue weight. But the most lowly and despised detail of housework is after all the one that is most valuable from the standpoint of hygiene. The scrubbing and wiping up of floors are two movements in which the weight is taken entirely from the feet. In the position on the hands and knees gravity acts to the best advantage, and the shoulder movement is comparatively free. The mop, that labor saving device, is from this point of view no improvement over the scrubbing brush.

SANITARY INSTRUCTION FOR WOMEN.

SOME details of the work of the Department of Domestic Science in the Pratt Institute of Brooklyn, published by the Institute, show it to be one of its important branches. "It originated," says the director, "in a desire to render potent in life the belief that malnutrition, disease, maladjustment of life, inefficient work, unrest, needless exhaustion, and many similar human ills would be lessened, if not dissipated, were the principles of nutrition and other laws of life to be applied wisely to everyday life." Instruction was at first given in practical housework, such as cooking, cleaning, serving, etc., and was afterward extended to the natural science and art underlying such work. In connection with the more scientific part of the curriculum the pupils are given a course in chemistry, plumbing, and heating. These lectures, which come under the subdivision of "household economics," embrace the underlying scientific principles connected with plumbing and instruction in methods conducive to the maintenance of sanitary conditions in the home. Some attention is also given to the sanitary requirements called for in the construction of a house.

"GREEN GABLES," COHASSET, MASS.

THE illustrations on cover and pages 24, 25, and 35 present "Green Gables," the summer home of E. N. Foss, Esq., at Cohasset, Mass. The principal characteristics of the building are the stone terrace which extends across the front of the building, and the numerous gables, from which it gets its name. The terrace is constructed of field stone, laid stone-wall fashion in a random manner, with excellent effect. The main building is plastered on the exterior with a cement plaster and is treated with silver gray paint. The trimmings are painted a bottle-green. The roof is covered with shingles and is stained a moss green of brilliant hue. The gables are beamed, while the spaces between the beams are filled in with plaster. The design shows many interesting details, which are presented on page 35. The entrance is into a large living-room, 23 ft. x 36 ft., which is trimmed with white pine and treated with old ivory white. This living-room has a paneled wainscoting, wooden cornice, a bay window, and a nook with seats, and an open fireplace, built of gold color Roman brick, with the facings and a hearth of the same, and a Colonial mantel with paneled overmantel. The staircase hall is separated from the living-room by an archway, and it contains an ornamental staircase with turned balusters, rail, and newel, treated with old ivory white, except rail, which is of mahogany. There is a paneled wainscoting and ceiling beams in this hall. The den is trimmed with whitewood, and it has a beamed ceiling, paneled wainscoting, and an open fireplace. The dining-room, 20 ft. x 24 ft., is trimmed with quartered oak. It has a high paneled wainscoting, finished with a plate rack and a massive beamed ceiling. The fireplace is built of Roman brick, with the facings and a hearth of the same, and a mantel of oak, in harmony with the general effect of the dining-room treatment. The butler's pantry, rear hall and stairway, kitchen, kitchen pantry, laundry, etc., are trimmed with North Carolina pine. These apartments are provided with all the best modern conveniences. The billiard-room is trimmed with California redwood, and is provided with a paneled wainscoting four feet in height and a massive beamed ceiling. The attractive feature of this apartment is the nook with its paneled seats and the fireplace with pressed brick facings and hearth, and the massive mantel and overmantel. The lavatory opening from the billiard-room is fitted up complete. The boys' playroom is trimmed with whitewood. The second story is trimmed with whitewood and is treated with old ivory white. There are six bedrooms and two bathrooms on this floor, besides four servants' bedrooms and bathroom, which are located over the kitchen extension. The bathrooms are furnished with porcelain fixtures and exposed nickelplated plumbing. There are several bedrooms and ample storage room on the third floor. The cemented cellar contains a furnace-room, etc. Messrs. Chapman & Frazer, architects, 8 Exchange Place, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A SUMMER COTTAGE AT WOODMONT-ON-THE-SOUND, CONN.

THE summer cottage which is presented on page 30 has been erected for Granvill W. Goodsell, Esq., at Woodmont-on-the-Sound, Connecticut. The building is built on brick piers with stone footings. The superstructure is of wood, the exterior of the first story being covered with matched and dressed white pine, and the second story with shingles. It is painted white with cream white trimmings and red sash. The roof is covered with shingles and painted a dull shade of red. The entrance is into a large living-room, which is ceiled up with narrow beaded stuff and with the studs dressed and chamfered. The dado is painted blue, the walls above old rose, and the trimmings white. The staircase rises from this room to the second story, and it has a newel-post and rail with rope balustrade. The principal and most attractive feature of this room is the massive open fireplace, which is built of stone; these stones are of unusual beauty in color and are selected from the shore. At one side of the fireplace there is an alcove provided with a paneled seat, and at the other end of room there is also a seat provided in the corner. The dining-room is treated in a similar manner, with dressed timber exposed and painted in colors. The butler's pantry and the kitchen are provided with all the best modern conveniences, and the latter has an enclosed rear yard with lattice work, containing a wood-house and bathboxes. There are also on this floor one bedroom and two bathrooms. The second story is treated in a similar manner, and it contains five bedrooms and ample closets. The floors throughout are of hard pine, oiled and rubbed down to a polish. The cost is \$3,500 complete.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.



The Garden

THE PRIVATE GARDENS OF ENGLAND.

SOME interesting facts concerning private gardens in England have been gathered by the Commercial Advertiser. The chief beauty of English villages, it remarks, is the window gardens. The cottages are sometimes picturesque, and the village inns and shops often charmingly quaint and pretty, but the real color and character of the English village are mirrored in its window gardens, which show the national love of posies. So it is not astonishing to find a duke of many acres and a lord of many rents spending thousands of pounds each year on his private park and posy beds. There are in England, Scotland and Wales no fewer than ten thousand places dignified with the title of "country seats." These are not small houses, but the residences of gentlemen who keep large staffs of gardeners and laborers. It would be a low estimate to place the average cost of labor and cottage accommodation at each of these seats at \$25 a week—or, say, \$1,250 a year. This alone will amount to a sum of \$12,500,000.

The up-keep of the garden, the repair of glass houses, the purchase of manures, seeds and plants would, at a very moderate estimate, run to \$500 a year. This does not include capital expenditure, which in some gardens is very large. In some gardens, forty, fifty, or more glass houses may be found, and, omitting the cost of labor and of the ground occupied, the actual money expenditure is very large.

One of the finest gardens in England is that of Chatsworth, whose fame is world-wide; the magnificent grounds of Trentham Hall, owned by the Duke of Sutherland; the Marquis of Bute's gardens at Cardiff Castle, where open-air grape growing has achieved some success after costly experiments; the seat of Lord Llangattock at Monmouth, the Buckinghamshire home of the Rothschilds, are all celebrated for their beautiful gardens.

If the large sums given for rare and new orchids—\$500 for a plant being a by no means out of the way price—is borne in mind and the cost of keeping is made the main test, it is probable that Lord Rothschild's garden and grounds at Tring would come first as the most expensive in England. The expense of the maintenance of such a place is enormous. There are about forty or fifty gardeners and laborers constantly employed, and their wages alone would make a tolerable income for a successful business man—let us say \$12,500 a year. Then there are the repairs of houses and their modification, furnaces to be supplied with coal, water, which must be brought in ample quantities whenever stove culture is attempted, and is needed in all parts of the garden, and seeds to be purchased, to say nothing of plants. For in regard to plants any trustworthy estimate is impossible, for the price may vary from a few cents to thousands of dollars. Walls have to be built for fruit growing, nets bought to protect the tender buds in spring and to keep off the birds from newly sown ground, etc., and the tools and the hundred and one incidentals would help to swell the total. Twenty-five thousand dollars a year would not be sufficient to keep up such a garden in the way in which it is kept up, and a much larger sum would be needed if we included the cost of the maintenance of grounds, fences, roads, etc., which, though not strictly speaking gardener's work, often comes under the supervision of the man responsible for the garden.

At Tring, as at many other houses of the kind, the gardening, though there is much to be seen at all seasons, aims chiefly at the production of special attractions during a particular portion of the year. The late summer and autumn are the seasons when Tring is at its best, and little or nothing in the shape of spring bedding is practised.

Tring Park mansion dates back to remote times, and it is on record that it was once the property of Matilda, the wife of King Stephen. There are now many birds and animals from all parts of the world in the park. These importations from foreign lands include families of ostriches and kangaroos, which have become acclimatized, and are kept in the grounds under natural conditions.

LAWN TABLES.

THE "tented" tables are made for lawns. They come in enameled wood, finished in dark colors, and in forest green and gay reds, and are provided with large umbrellas, heavily fringed. Smaller tables with deep drawers for work, or racks for books and magazines, with tea-tables of one and two tiers, come in wood and wicker and in many designs.



THE HALL.

No part of a flat offers so many obstacles to successful treatment as the hall. It is invariably a narrow, ugly passageway, grudgingly given by the builder as unavoidably necessary, hardly wide enough to move through and certainly most difficult to decorate. The Tribune has some suggestions to make on this subject. First of all, it says, the long, narrow vista must be broken. This may be managed by a grille, placed a short distance from the front door, from which a drapery must hang. There is never too much light, so the best drapery is the Japanese bead or bamboo portiere in light colors. About two thirds of this may be caught back to the wall on one side, the other strings hanging straight. Between the division thus made and the door, on any available wall space, a narrow shelf may be placed at a height sufficient to keep it from danger of being struck by those passing. Graceful wrought iron brackets should hold it, and below it might hang a piece of Eastern embroidery, a small Oriental rug or a large plaque of Benares brass. Lacking any of these, even a large unframed picture may be tacked on the wall under the shelf. On the other vacant wall space, if there is any, three or four engravings in passepartout frames should be arranged irregularly. The same plan may be carried out on the other side of the portiere, or engravings, either in passepartout or unframed, may be used as the only decoration in that part.

THE COOPERATIVE FLAT.

A WOMAN who has had some experience in house-keeping in a flat on the cooperative basis contributes some results of her experiences to a daily newspaper. For cooperative flatting, she truthfully remarks, pliability of temperament is necessary as well as courtesy. I have found that business women are apt to be free from the nerves and whims of the unoccupied woman. They learn to think before they speak and to keep opposite opinions to themselves. It is really quite easy to get a congenial group of business women together. I can pick out ten letters from this heap that are so concisely and so well written that I would venture to guarantee that the writers would prove desirable co-flaters.

Naturally, gossip must be firmly barred from a home of this sort, and public fault finding is out of the question. Chronic fault finders are disagreeable in any walk of life, but in a small home of this kind they would prove impossible. The idea of cooperation must be kept in mind and carried out in spirit as well as in practice.

It is impossible to describe all the varied comforts obtainable by each separate individual in return for her personal outlay of money. But in the various small luxuries of home, such as plenty of clean towels and table linen, facilities for frequent comfortable bathing, the comfort of plenteous ice, the pleasure of informal dressing, the cooperative flatter will find things that will contribute to the happiness of a woman at home, but are unobtainable luxuries in a boarding house and sometimes in a hotel.

FLATS VERSUS HOUSES.

THE increase of high-priced flats and apartments in New York is one of the striking peculiarities of metropolitan life. Why pay as much for an apartment as for a whole house? is one of the stock questions of the visitor from elsewhere. The financial aspect of the problem was investigated some time since by an inquisitive reporter with the following results: A comparison was made between a corner apartment of eleven rooms and a twenty-five-foot modern five-story private house. The area of the former was equal to about 70 per cent. of the latter. The rental of the apartment is \$3,600 a year. A private house in the same locality and with the same number of rooms may be leased for about \$2,100. The maintenance of an apartment is approximately 30 per cent. less than that of a private house, figuring in both cases an equal number of rooms and the same style of living. That the sizes of the rooms in this building compare favorably with those of the average city dwelling is apparent from this summary: Living room, 18x25 feet; drawing-room, 16x19 feet; library, 12x14 feet; dining-room, 20x26 feet; chambers, 15x20 feet; kitchen, 12½x15½ feet; servants' rooms, 9x12 feet; private halls, 5 feet wide.

VINEGAR and salt or oxalic acid, rubbed on quickly, will clean brasses. They should be washed immediately, and polished with tripoli and sweet oil.

A RESIDENCE AT BRYN MAWR, PA.

THE engravings shown on pages 23, 32 and 33 illustrate a residence erected for Mr. Jesse Nalle at Bryn Mawr, Pa. The building is treated in the Georgian style of architecture. It is constructed of hard burned red brick laid in white mortar, with dressed Indiana limestone trimmings. An attractive feature of the front entrance is the cut stone doorway with its classic columns and entablature. The roof is effectively covered with red tile, and is in harmony with the remainder of the building. Dimensions: Front, 135 ft. 3 in.; side, 45 ft. 3 in., not including porch and terraces. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. 6 in. The reception-hall is a very handsome room. It is treated with ivory white enamel, and contains a paneled wainscoting and massive door and window casings with pilaster effect. The fireplace is massive and it has marble facings and hearth, and a mantel with fluted pilasters, Ionic capitals, and an over-mantel. The staircase hall is separated from the reception-hall by an archway supported on Ionic columns. The grand staircase rises from a central well, with newel-posts formed of a cluster of spindle balusters and a mahogany rail. There is a large window on the stairway landing glazed with leaded glass. The drawing-room is trimmed with white mahogany, and it has an open fireplace with marble facings and a hearth and mantel. The library is trimmed with oak and it contains bookcases built in, paneled seats, and wainscoting. The den is treated in the Gothic style, and is trimmed with Flemish oak. It has a paneled wainscoting and seats, and an open fireplace built of brick, with facings and a hearth of the same, and a mantel of Gothic design. A feature of this room is the panelwork and cabinets over the windows and extending around the room. The drawing-room is trimmed with oak, and it has a paneled wainscoting and a beamed ceiling. It contains an open fireplace. The butler's pantry is fitted up complete and is provided with sink, dressers, drawers and cupboards. The rear hall and stairway is conveniently located. The kitchen and laundry are provided with all the best modern improvements. The second floor is trimmed with white pine and treated with white enamel. This floor contains eight bedrooms, ten closets, three bathrooms, besides three servants' bedrooms and a bathroom. The bathrooms are paved and wainscoted with tiles and are furnished with porcelain fixtures and exposed nickelplated plumbing. There are two bedrooms and ample storage room on the third floor. A cemented cellar contains the heating apparatus, cold storage room, coal and wood bins. Mr. William L. Price, architect, 731 Walnut Street, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A FORMAL GARDEN IN ELIZABETH, N. J.

THE illustrations on page 34 are photographs of the formal garden of F. H. Davis, Esq. This is a very charming garden, designed with much skill and care. The garden is an interesting one because its results are achieved by comparatively simple means. The architectural adjuncts are confined to the terrace steps and the semicircular summer house, while the great open space is simply yet effectively treated.

The illustrations have been made from photographs taken expressly for the BUILDING MONTHLY.

SMALL PARKS AND REALTY VALUES.

A NEW YORK real estate paper has collected some information from brokers on the effect of small parks on realty values. Quite a number of such parks have been opened in New York in the last few years, and it is a matter of some interest to know of their effect on rents. A broker of some experience with renting in the lower East Side does not regard them as beneficial from the owners' standpoint. Rents are but slightly higher, while the assessed valuation is much greater than a few blocks distant. Another broker regarded them as beneficial in raising rents, while a third pointed out that the families dispossessed to make room for one improvement had not returned to occupy the new tenements built on the parks, which had rented badly. Another found the increased noise of children in the parks a detriment to renting, and still another, where houses of a better class had been built facing the park, thought them desirable.

On the whole, we are told, the parks of the lower East Side have effected the decrease in value of property facing them through the necessitated removal of business houses to other sections. The slight increase which owners have been able to make in the rent of apartments has frequently not equaled the loss of the larger amount paid for the ground floor store. But, on the other hand, the increased demand for business sites and living rooms in sections a little removed from the parks, arising from the former occupants of condemned property, has, at all events for a while, more than offset this.



FRESH AIR.

THE value of fresh air as a tonic is thus alluringly set forth by a Chicago paper. Outsiders may, perhaps, think that it was produced under the stimulating effect of the dirty atmosphere of the great Western city, but it is full of truth every word of it.

The majority of men and women, it says, fight fresh air as if it were a disease. If people would only realize what fresh air would do for them and take a little trouble to gain it there would be healthier babies, happier mothers, fewer disgruntled fathers, better books. If one can not go into the country, take a street car ride to one of the parks. Don't go in the evening if you can go in the morning. Get up early, when the world first wakes up. See the sun rise. You can almost see the flowers blink their sleepy eyes and hear the morning prayer whispered by the trees. The World is very beautiful early in the morning, before she has grown tired with the trials and work of a long summer day. Get Mother Earth's morning smile, and you will do better for it the rest of the day.

Fresh air will clear the cobwebs out of your brain, put a new strength in your muscles, a new life in your blood, a new lightness in your step. It will brush away the petty ills that bother everyday life. It will help you to bear more patiently with your brothers. It will strengthen your shoulders for the burdens that must be laid upon them. It will make the hardest work lighter and the darkest day brighter. It is God's tonic. Try it.

THE COUNTRY MOVEMENT.

THAT the country folk flock to the city, and that, in their turn, the city folk are flocking to the country, are phenomena we all know. It is less commonly known that in the face of the general trend toward urban concentration that has marked the increase of population in the United States, the growth of rural population in the Pacific Northwest has kept pace with that of the town. In pointing out this fact, the Portland Oregonian explains that urban growth in the Northwest was checked by the period of business depression that followed the panic of 1893. When industrial stagnation came, large numbers of people forsook the cities because they could not make a living in town, and they could in the country. Many found that they could do better in the country than in town, and this tended to give a prestige to the country. All kinds of land have been in active demand, from the treeless "desert" range to the most heavily timbered tracts. It has been particularly marked in the past two years, and it continues unabated. But for the chance circumstance of the Alaska stampede, the comparison between the town and the country would be still stronger in favor of the country.

NATURAL BEAUTY.

ONE of the most encouraging signs of a healthier and more normal community life, remarks the Boston Transcript, is to be found in the interest taken in the possibilities of natural scenery. The landscape architects have been working hard and patiently for many years to open the eyes of the people to a more artistic use of their surroundings. The awakening seems to be at hand. Every year has shown a greater eagerness for country surroundings and a corresponding desire to bring the green of the country into a city's somewhat barren life. It is now necessary that those who go to the country should learn to adapt the houses they build to the nature about them, and that those who design a city's parks should see that the nature they introduce is in keeping with the dignity of a city's architecture. It is the privilege of every resident in city or country to contribute to the public good by beautifying in the simple and natural ways which Nature points out the plot of ground on which he lives.

THE FARMER'S WIFE.

A TRAVELER into the farming district of New England draws a rather somber picture of the monotonous life led by the farmer-wife. Farmer's wife and small shopkeeper's wife, he says, alike rise betimes in true Scriptural fashion, because, forsooth, breakfast must be out of the way and dishes washed before seven o'clock. There is almost never a servant. The rest of the morning is spent in housework, chiefly in the kitchen making cakes and pies and cooking a meat dinner, which is seldom served later than 12.30 o'clock. By the time dinner is eaten, the food set away and the dishes washed, all in the heat of noonday, the housewife has earned a respite. But leisure has no especial value of its own, it is only a stopping time until the next piece of work must be taken up.

A RESIDENCE AT JAMESTOWN, N. Y.

THIS house, which we illustrate on page 28, was built on Lakeview Avenue, Jamestown, N. Y., for Frederick P. Hall, Esq. From the rear one can overlook Lake Chautauqua, with a beautiful view of the hills and rolling country beyond as a background. The house is of frame construction, and the side walls and gables are covered with white cedar shingles special cut 24 inches long and laid 10 inches to the weather in order to carry out the old style in as correct manner as is possible. The shingles are stained a silver gray and the trimmings are painted white. The interior is finished in hard and soft woods. The reception-hall is trimmed with white maple; the stiles and rails in doors, wainscoting and stair paneling being straight grained, while the panels are of selected bird's-eye maple. This treatment presents a beautiful effect, which is far more pleasing than if a solid grained wood treatment had been adopted. The hall wainscoting is 2 ft. 6 in. high to carry out the Colonial style. The parlor is trimmed with white pine, painted and enameled and then rubbed down to an egg-shell finish. The library is trimmed with natural quartered oak, and the dining-room with quartered antique oak. The dining-room has a paneled wainscoting 4 ft. 6 in. high and ceiling beams. The parlor, hall and library have molded plaster cornices in angles of ceiling. The kitchen, pantry, storeroom and rear hall are trimmed with ash. The kitchen is wainscoted 4 ft. high with straw-board lumber, and the distance between openings and the height is in one piece; this material can be worked as easy as the ordinary lumber and painted, and when up is as hard as iron, with no joints for vermin. It makes a most desirable material for kitchen and bathroom wainscoting since it can be enameled to a surface equal to tile. The second story rooms throughout are trimmed with soft woods; some left natural, others painted, except the front room over parlor, which is trimmed with black birch. The attic contains servants' rooms and large playroom; the dumbwaiter extends from cellar to third floor, and is used for removing trunks and bulky articles. Cellar extends under the entire house and contains a laundry, furnace, coal, vegetable and servants' bathrooms. The plumbing is of the latest improved open plumbing, and the house is heated by direct and indirect steam. E. G. W. Dietrich, architect, 320 Broadway, New York City.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT GREENWICH, CONN.

THE residence at Greenwich, Conn., which we present on page 31, has been erected for James F. Walsh, Esq. The underpinning, first story, and the balustrade to piazza and porte-cochère are built of rock-faced field-stone laid at random. The second story is of wood, and the exterior framework is covered with shingles and left to weather finish. The trimmings are painted white. The roof is covered with shingles and left to weather finish. Dimensions: Front, 51 ft.; side, 47 ft. 6 in., not including piazza and porte-cochère. Height of ceilings: Cellar, 8 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The plan shows a central hall with rooms on either side. This hall is trimmed with quartered oak, and it is fitted with a paneled wainscoting and ceiling beams. The doors and windows in this hall, as well as throughout the principal rooms, have massive fluted trim with carved caps. The staircase at the end of the hall is turned out of oak, and it has a newel-post with candelabrum complete. The drawing-room is treated with ivory white. The fireplace is provided with tiled facings and hearth and a mantel with overmantel furnished with an oval mirror. The library is trimmed with oak. It is provided with a fireplace furnished with a green tile hearth and facings with wrought iron trimmings, and an oak mantel with columns, carved capitals, and a mirror. The dining-room is trimmed with oak and it has a paneled wainscoting six feet in height, and a beamed ceiling with the spaces between the same paneled. The fireplace is built of cobble stone, with stone shelf. The butler's pantry is trimmed with North Carolina pine, and is fitted with sink, drawers, dressers, etc. The kitchen is trimmed with North Carolina pine and is provided with all the best modern improvements. The second story is trimmed with sycamore. There are five bedrooms provided with well-fitted closets, linen closet and two bathrooms on this floor. The bathroom is paved and wainscoted with tile and furnished with porcelain fixtures and exposed nickel-plated plumbing. Two of the bedrooms on this floor are treated with white enamel, while the remainder is finished natural. There are five bedrooms on the third floor. The cemented cellar contains a laundry, cold storage, furnace-room, servants' bath, and a billiard-room trimmed and paneled with oak and provided with an open fireplace. Mr. Frederick G. C. Smith, architect, Greenwich, Conn.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.



GOOD ROADS IN NEW YORK.

THE value of good roads as a fundamental element in general improvement is constantly receiving more and more recognition. Oneida, points out a recent writer, is one of the most progressive of New York counties in the matter of making and caring for good roads. About three years ago Paris, one of the towns in the county, led the way in changing to the direct-tax method from the labor-tax method in caring for the highways, thus becoming entitled to aid from the State to the extent of 25 per cent. of its road-tax levy. The work was so well done that in the following year four other towns in the county adopted the system, and this year nine more towns have been added to the number operating under it. These thirteen towns will receive this year approximately \$4,000 of State aid, and will have highways that should be the envy of other towns in Oneida and other counties. Aside from its manifest advantages is the fact that, under the law, the supervisors can at any time place the entire county under the money system and appoint a county engineer. In that event, towns which had not adopted the money system by popular vote would not be entitled to State aid. A general law applying this system to the whole State was adopted at the last session of the legislature.

OPPORTUNITIES FOR CITIES.

A LETTER sent to the mayors of many American cities by the American Park and Outdoor Art Association points out some of the possibilities for civic improvement that are within the reach of every municipality. Cities have it in their power, says the letter, to do planting on a more generous scale than can be done by corporations or individuals, thus setting an example and suggesting the improvement of their buildings and grounds to county officials and State authorities as well as to local manufacturers. City officials and citizens should use their influence to have the grounds about railway stations made attractive, and objectionable buildings and sheds about them completely hidden by trees, vines and shrubbery. During vacations restrictions should be removed, and public school grounds made municipal pleasure grounds. This would give pupils attending parochial schools opportunities for exercise and pleasure, as well as the children of other taxpayers. Cities can, by the passage of ordinances, control and restrict public advertising on and about approaches to public parks, on trees, tree boxes, telegraph, telephone, electric light and street railway poles.

SUBWAY STATIONS IN NEW YORK.

PERHAPS no feature of the elevated railroads in New York is so completely disfiguring as the stations. Hideous, untidy obstructions, they have absolutely nothing to commend them but their convenience to the public. A better system seems to be under consideration by the Rapid Transit Commissioners for the underground railroad. One of the suggestions is that no two stations will be decorated or colored alike. The Commissioners and the contractors have agreed that each station must have some distinguishing characteristic, so that a passenger looking out from the windows of his train may tell at a glance just what station he is in. On the elevated trains, as it is at present, it is easy for the passenger to tell by passing landmarks what section of the city he is in, but whirling through the tunnel, the walls between stations will have considerable sameness.

STREET CLEANING IN BOSTON.

A REPORT on street cleaning in Boston, issued by the Twentieth Century Club of that city, contains much useful information on some of the methods that prevail in that city in street cleaning. The process of sweeping and removing the refuse, which is entirely inefficient, is thus described:

The streets are first sprinkled. Then machine sweepers brush the dirt into the gutters. These machine sweepers are followed by a squad of men with hand brooms, who brush the dirt into small piles. These men are followed by the carts that take the dirt to the dump. Each cart has two men, a driver and a helper. Each man has a shovel, and with the cart is a broom. The driver of the cart shovels one pile of dirt into the cart, moves the cart along to the next pile, which is shoveled into the cart by the helper, the driver looking on while he does it. The next pile is shoveled into the cart by the driver, while the helper looks on; and so the work goes on, the piles being shoveled into the cart alternately by one of the two men, the other standing idle.

A PAIR OF HOUSES AT GLENSIDE FARMS, PA.

THE pair of houses which are illustrated on page 26 have been erected for Wm. T. B. Roberts, Esq., at Glenside Farms, Pa. The underpinning and the main part of the first and second stories are composed of red washed brick laid in red mortar. The remainder of the building is constructed of wood, and is covered on the exterior with shingles and plaster work. This plaster work is painted Colonial yellow, and the beams and all trimmings are painted a dark brown. The shingle work is painted a Colonial yellow and the sash ivory white. The roof is covered with shingles and is painted a brilliant red. Both houses being treated alike, a description of one only is given. The hall is trimmed with chestnut, and it has a paneled seat with oriel window and column effect, an ornamental staircase of good design, and an open fireplace built of Roman brick, with the facings of the same, a hearth of Dutch tile, and a mantel. The reception-room is treated with ivory white. The fireplace has a white enamel tiled facings and a hearth, and a mantel of Colonial style. The dining-room is trimmed with chestnut, and it has a bay window and a plate rack extending around the entire room, placed six feet from the floor. The butler's pantry is fitted with sink, drawers, dressers, complete. The kitchen is trimmed with North Carolina pine, and it contains a sink, a "Novelty" range, dresser, etc. The second story hall is trimmed with chestnut, and the remainder of the house is trimmed with pine treated with white enamel. There are four bedrooms and a bathroom on the second floor, and three bedrooms and linen closet on the third floor. The bathroom is wainscoted and is furnished with porcelain fixtures and exposed plumbing. A cemented cellar contains a furnace-room, coal and wood bins. Mr. Charles Barton Keen, architect, 1420 Chestnut Street, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT CHESTNUT HILL, MASS.

THE residence presented on page 29 has been completed for John Kent, Esq., at Chestnut Hill, Mass. The underpinning is built of rock-faced bluestone. The superstructure is constructed of wood, and the exterior framework is covered with matched sheathing, and then shingled. It is stained a dark brown, while the trimmings are painted bottle-green. The blinds are painted similar. The beamed gables are filled in with plaster work. The roof is covered with shingles and left to weather finish. Dimensions: Front, 51 ft.; side, 28 ft., exclusive of porch, den and piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft. 6 in.; second, 9 ft.; third, 8 ft. 6 in. The entrance hall is trimmed with pine and treated with ivory white paint. The walls are covered with blue and silver paper. The staircase is handsome in design, and it has newels and balusters treated in ivory white and a rail of mahogany. The den has green burlap walls and white painted trim. The reception-room is treated with white enamel. The library is painted with white enamel, and it contains an open fireplace built of brick, with the facings and a hearth of the same and a mantel. There is a paneled seat at the side of the fireplace, with a cluster of diamond-paned windows. The dining-room is trimmed with oak, and it has a paneled wainscoting and a wooden cornice. It contains an open fireplace built of brick, with the facings and hearth of brick and a mantel of oak. The butler's pantry is trimmed with North Carolina pine, and it is fitted up complete with drawers, dressers and sink. The kitchen is provided with a similar trim, a large store pantry, sink, and a lobby large enough to admit ice-box. The second story is treated with white enamel, and it contains four bedrooms, large open hall, linen-closet, and two bathrooms; the latter are wainscoted and are provided with porcelain fixtures and exposed nickel-plated plumbing. There are one bedroom and a trunk-room on the third floor. There is a cemented cellar under the entire house, and it contains a laundry, furnace-room, coal and wood bins. Mr. H. S. Frazer, architect, 8 Exchange Place, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

The elemental requirements in house designing, according to a recent English writer, are plenty of closets for the housewife and a "den" for the man. These are the things really wanted in almost every house, the requirements of a great mansion being, of course, specialistic and in a class by itself. There is a good deal of sound sense in this proposition, and yet the closet question is apt to be overdone. Not that a house is ever built with too many closets—every architect and every housewife knows how foolish such a statement would be!—but the value of a house does not depend alone on the number of closets it contains. It is quite as necessary for the housewife to realize this as it is for the architect to meet every reasonable requirement in this respect.

Sanitation

VACANT HOUSE PLUMBING.

A TIMELY reminder that the dangers from bad sanitation are not confined to the period of the occupancy of the house is made by the Metal Worker in an important article on the "Treatment of Plumbing not Used in Summer." The most general method, says the writer, is to empty the traps and fill them with something that will not evaporate or dry up so quickly as water. As a rule, the plumber is not called again when the family returns, because the fillings can be "flushed" out with water, which is one reason why the plan is more or less unreliable, and is never so safe as when sewer air is excluded from the house entirely. Glycerine, kerosene, castor oil or lard oil is used. Glycerine is best, and kerosene is a good second choice where there is no danger of it being either sucked or waved out by vacuum or pressure.

When any of these seals are depended upon, water must not be dumped nor drawn into the fixtures. Every trap, except water closet traps, has, or ought to have, a drain screw or top cap through which the water seal can be drawn or soaked out with a sponge or rag. Water closet traps always have to be soaked out. Only the upper trap of double trap closets need be filled, but the air pipe must be fitted with a blind washer to keep sewer air from coming out through the tank. The contents of each trap should be noted when the water seals are being taken out, as the amount of water removed gives a fair idea of how much glycerine should be put in. Before emptying the traps should be flushed well to cleanse them, and to make sure that the seal is as deep as the trap will permit. The trap should be well wiped with a swab, and examined before filling to see that there are no strings, hair or lint hanging over into the waste pipe. These, if present, will rob the trap of the filling by capillary attraction.

When none of the fixtures are to be used during the summer months, a good plan is to insert a test plug through the clean out where the main soil pipe leaves the house, and expand it so as to prevent air from the sewer entering the house at all.

If no clean out exists the clean out of the intercepting trap may be removed and a short handle test plug dropped in and expanded in the out leg of the trap, and the trap cover replaced air tight. If the intercepting trap is outside of the house, plugging the pipe through a clean out also cuts off the ingress of air to the house system through the regular fresh air inlet. This may be avoided by providing a temporary inlet from the outside, connecting the same with the clean out opening.

Plugging the soil pipe makes it necessary to stop the supply to the fixtures, either shutting off the faucets tight and leaving them so, or by shutting off the water and draining the pipes. If the boiler is also emptied, the sediment cock should be closed again. If emptied, there is some danger of injuring the water back by having a fire started while it is empty. If left filled, the boiler must be emptied and thoroughly cleansed before the work is again put in operation. When the supplies are drained the faucet washers dry out, get hard and give trouble when the water is again turned on, and one must watch all unions that have washers in them.

If the soil pipe has been plugged, the next thing to do toward making the work perfectly safe is to choke the waste pipes of all the fixtures above the traps.

Baths may be choked by lifting out the standing waste stem and plugging the bottom of it tightly with a cork. On lavatories with lead traps the traps can be bent down and choked with a cork and made air tight by melting cement over the top of the cork, or a blind washer of sheet lead may be soldered over the top. Sink traps can be treated the same as lavatory traps. Slop sinks can be choked by screwing a blind plate down in putty in place of the regular strainer. Brass lavatory traps can be loosened from the metal bowl plug or standing waste and a blind metal washer put in on top of the ring washer and again tightened up.

Leather flush washers shrink, crack and sometimes draw entirely out of place when work is not in use. Rubber washers that are not pure are often found cracked and worthless, too. All washers should be examined before water is turned on or into the fixtures.

When some of the fixtures are left in operation for the convenience of servants, the servants must be held responsible for the regular use of those fixtures, and they should be made acquainted with the condition of the balance of the plumbing. If the whole job is left normal, the servants should flush each fixture every day. If not, a sign of warning should be placed on every fixture having the waste choked.

THE NAVAL BRANCH OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION.

THE engravings shown on page 27 illustrate the new building for the Naval Branch of the Young Men's Christian Association, which has been erected on Sands Street, Brooklyn, N. Y. It is intended that the building herein described shall fully provide for the needs of the men of the navy while in port, and to do this it was necessary to consider their many-sided manhood. An investigation of the building will show provision for recreation, physical development, mental training, social enjoyment and culture, and for spiritual upbuilding. These have not been included on the basis of a theory, but as a result of experience. It is constructed of dressed Indiana limestone and pressed brick, and has a massive frieze and cornice, which is surmounted with a heavy Colonial effect, forming an enclosure for a roof garden which is located on the top of the building. The dimensions of the building is 75 ft. x 100 ft. The main floor is the most important one in the building. Passing through the vestibule, one enters directly into the reception-hall, with its attractive staircase, marble drinking fountain and a vista of adjoining rooms. The drinking fountain is of unusual interest on account of its being four hundred years old, and of the Italian Renaissance period. It is carved in the Florentine style of the sixteenth century of a pure white marble. The water flows from a curved lion's head into a large oval bowl supported by lion's feet. This hall contains the office department for the transaction of all business, and an elevator running from the sub-basement to the seventh floor. There is also a large reading-room fitted with bookcases and an open fireplace, a writing-room, game-room, and the restaurant of the building, containing the necessary serving-room complete. The second floor contains the auditorium with ample gallery and a seating capacity of 550, a small lecture-room, both of which can be used for social gatherings, lectures, entertainments, etc. This floor also contains ample provision for the private apartments of the secretaries and matrons. The third floor, besides containing the auditorium gallery, has twenty-four sleeping-rooms. The building contains 201 sleeping-rooms and four dormitories. The fourth, fifth and sixth floors each contains 52 sleeping-rooms, and a dormitory accommodating ten single beds. Each room contains a call and return bell. The seventh floor contains fourteen rooms and another dormitory and the janitor's apartments. There is also on this floor a camera department with a dark room, and a modern laundry where the sailors may have their laundry done cheaply and quickly. Provision is also made on this floor for a roof garden. The basement contains an exercise-room, a swimming pool 16 x 22 ft., and is finished in marble and white enameled brick. It is 4 feet deep at one end and 7 feet at the other, and has a capacity of about 17,000 gallons. The plumbing is so arranged that it can be emptied as often as is needed, or the water can be kept at any temperature desired. Adjoining the pool are five shower baths. The whole system of plumbing in this building is such as to attract the attention of master plumbers; it being a triple system, enabling the engineer to attach to street or city pressure, or to connect direct with the artesian well. The basement also contains 500 lockers, the kitchen conveniently located and connected with the floor above, a barber shop, and toilet-rooms complete. The working out of the plan has been the usual process of evolution. The dedication of this building marks the beginning of a new epoch in the work for American sailors. It stands for far more than the work already being done at the New York Navy Yard, and it represents a policy and a well defined plan which will be extended until, through the establishment of branches afloat and ashore, wherever the need demands it, and all American sailors can have the benefit and influence of the Naval Young Men's Christian Association. Messrs Parrish & Schroeder, architects, 3 West Twenty-ninth Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

SIZE FOR ROUGH-PLASTERED WALLS.

THE Painters' Magazine states that liquid glue is the best size for rough walls when they are hard. Apply the glue size and let it dry hard; then knock off the sandy grains with sandpaper, and fill rough places with plaster of Paris putty. Sandy walls should be leveled with a thin coat of calcimine, and, this being dry, a thin coat of glue size should be given. Let the glue size become hard, then put on the paper with light paste, and be careful to brush or pound down the paper carefully, as rollers will not work on rough walls. To make a first class job, lining paper should be applied to rough walls. Liquid glue is made by soaking good, white glue in water overnight, then melting it in the usual way and have it of good consistency. Put it, on cooling, into a wooden vessel, and stir into the mass nitric acid, one half ounce to each pound of glue. Keep the vessel well closed. Thin with cold water.

Legal Notes

INSTALMENT PAYMENTS—ESTIMATES.

By written contract it is provided that certain contractors will erect a building on a certain lot for the owner thereof for a fixed sum, payable in instalments on estimates and certificates of the architects as the work progresses. Estimates must be on the labor and material actually used in the building, and can not be extended to include material not so used, although in course of preparation for such use. The architects can only be required to make estimates and the owner to make payments on the building as it is constructed. *McConnell et al. vs. Hewes et al.*, 40 S. E. Rep. (W. Va.) 436.

INSUFFICIENT STATEMENT OF LIEN.

WHEN an account purporting to be an itemized account of materials furnished to a principal contractor for building a house, amounting in the aggregate to the sum of \$886.75, is filed with the clerk of a county court, and served with notice upon the owner, under the provisions of chapter 75, Code, which account contains one item, "Estimate furnished, \$485.00," such account and notice are not sufficient, under said chapter, to entitle the material man to his lien for said item of \$485.00. *Niswander et al. vs. Black et al.*, 40 S. E. Rep. (W. Va.) 431.

LIABILITY OF OWNER FOR UNUSED MATERIAL.

MATERIAL men who furnish material to contractors do so at their own risk, unless such material is incorporated in the building for which it is furnished, or they notify the owner of such building in advance that they will look to her for payment therefor, and she acquiesces therein, and receives the material with such condition attached. In the latter case she, and not the contractors, becomes the purchaser of the material. *McConnell et al. vs. Hewes et al.*, 40 S. E. Rep. (W. Va.) 436.

LIEN UNDER SEVERAL CONTRACTS.

WHERE work is performed and material furnished in the erection of certain buildings under two separate contracts, and the rights growing out of said contracts are identical in character and as to parties, a lien for the amount due under said contracts may be enforced in one action. *Alabama State Fair and Agricultural Association vs. Alabama Gas Fixture and Plumbing Co.*, 31 So. Rep. (Ala.) 26.

LIQUIDATED DAMAGES FOR DELAY.

A BUILDING contract provided a specified sum as liquidated damages on failure to complete the work by a specified date; that, in case of delay due to the act of the owner, architect, or other contractor, the time fixed for the completion of the building should be extended for an equal time; but that no such allowance should be made unless a claim in writing was presented to the architect within twenty-four hours. *Held*, that the architect had no power to waive the written notice. *J. G. Wagner Co. vs. Cawker et al.*, 88 N. W. Rep. (Wis.) 599.

PLUMBING—"CIRCULATION PIPE."

A PLUMBER's contract for a dwelling house "to properly connect tank, boiler range, wash trays, butler's sink, and bath tub with galvanized pipe, with hot and cold water, to be put in good working order," does not require a circulation pipe for the hot water. *Jones & Hotchkiss Co. vs. Davenport*, 50 At. Rep. (Conn.) 1028.

OWNERSHIP OF UNUSED MATERIAL.

THE material furnished by a contractor, although the owner of the building may have a conditional interest therein, remains the property and at the risk of the contractor until it has been incorporated into the building, and has been approved by the architects. *McConnell et al. vs. Hewes et al.*, 40 S. E. Rep. (W. Va.) 436.

PAYMENT IN PERCENTAGES.

A PROVISION in a building contract that a certain per cent. shall be paid as the work progresses, does not affect the entire and indivisible nature of the contract, and where, at a given time, the per cent. specified has been paid, the balance of the estimated value remaining unpaid has not accrued, and is not due to the contractor. *Medley vs. American Radiator Co. et al.*, 66 S. W. Rep. (Tex.) 86.

New Building Patents

THE following list of New Patents relating to Building and Sanitary Science is prepared expressly for the BUILDING EDITION, by Munn & Co., Solicitors of American and Foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & CO., 361 Broadway, New York.

BRICK, STONE, AND TILE.

CREST TILE FOR ROOFS.	S. D. Noel, Indianapolis, Ind.	June 3	701,376
BUILDING TILE.	E. S. Lafferty, Galesburg, Ill.	June 10	702,103
ROOFING TILE.	A. Gustorf, Neuss, Germany.	June 10	702,202

CARPENTRY.

FOLDING DOOR.	E. H. McCloud, Columbus, Ohio.	June 10	702,146
WEATHER STRIP.	B. M. Whiting, Spokane, Wash.	June 10	702,270
WINDOW FRAME AND SASH.	A. Rasner, Pittsburg, Pa.	June 17	702,586, 702,587, 702,588
WEATHER STRIP FOR DOORS.	F. Flshbeck, Pittsville, Wis.	June 17	702,715
WINDOW.	W. D. Watson, Chicago, Ill.	June 17	702,754
SCAFFOLD.	J. Boardman, Philadelphia, Pa.	June 24	702,914
WINDOW.	H. I. Olsen, Hyrum, Utah.	June 24	703,150

CONSTRUCTION.

CONCRETE COLUMN.	O. W. Norcross, Worcester, Mass.	June 3	701,377
SINKING FOUNDATIONS.	A. Goerke, Berlin, Germany.	June 3	701,559
WALL OR FENCE.	G. Liebau, Maurer, N. J.	June 3	701,588
SUPPORT FOR BRICK ARCHES.	H. B. Strate, Grand Rapids, Mich.	June 10	701,960
MITER JOINT FOR EAVES TROUGHS.	T. Rye, Minnesota.	June 10	702,156
BRIDGING FOR JOISTS.	C. O. Nelson, Winnetka, Ill.	June 17	702,462
SHEET FOR ROOF COVERING.	W. H. Bache, Bound Brook, N. J.	June 17	702,614
FLOOR CONSTRUCTION.	W. H. Barrar, Boston, Mass.	June 17	702,616
ROOF GUARD.	S. P. Clark, Hartford, Conn.	June 24	702,723
CENTER CONSTRUCTION FOR FLOOR ARCHES.	G. B. Waite, Hoboken, N. J.	June 24	703,025
FLOOR.	B. A. Stevens, Toledo, Ohio.	June 24	703,150

ELEVATORS.

ELEVATOR.	E. R. Gill, Englewood, N. J.	June 3	701,326
LOCKING DEVICE FOR ELEVATORS.	M. R. Muckle, Jr., Philadelphia, Pa.	June 10	702,373
ELEVATOR.	M. Hanford, Malden, Mass.	June 24	703,127

FIREPROOFING AND FIRE EXTINGUISHMENT.

FIREPROOF BUILDING STRUCTURE.	J. O. Ellinger, Baltimore, Md.	June 10	702,093
APPARATUS FOR EXTINGUISHING FIRES IN CLOSED COMPARTMENTS.	H. B. Febiger, Philadelphia, Pa.	June 17	702,713, 702,714

HARDWARE.

DOOR CHECK.	J. Watts, Akron, Ohio.	June 3	701,431
DOOR HINGE.	W. L. Evans, Jr., Washington, Ind.	June 3	701,554
WINDOW LOCK.	S. J. Gibboney, Mt. Pleasant, Pa.	June 10	702,198
SASH CORD FASTENER.	E. L. Blackman, Brooklyn, N. Y.	June 17	702,395
SASH LOCKING MECHANISM.	Brooks & Whittaker, Paterson, N. J.	June 17	702,700
SASH FASTENER OR HOLDER.	J. W. Cade, Mt. Carmel, S. C.	June 17	702,774
SASH FASTENER.	R. D. Logan, St. Louis, Mo.	June 17	702,806
SASH FASTENER.	C. A. Goodsell, Harvard, Ill.	June 24	702,940
WINDOW ATTACHMENT.	R. Hamilton, Commerce, Texas.	June 24	703,252
LOCK.	L. Labeau, Briggsville, Mass.	June 24	703,281

HEATING AND VENTILATION.

HEATING AND VENTILATING DRUM.	A. W. Brock, Alma, Mich.	June 3	701,286
REGISTER, VENTILATOR, AND THE LIKE.	H. S. Hart, New Britain, Conn.	June 3	701,481

PLUMBING.

FLUSHING APPARATUS.	C. B. Day, E. Orange, N. J.	June 3	701,548
WATER CLOSET.	W. Bunting, Jr., Brookline, Mass.	June 17	702,536
FAUCET.	F. P. Sparmaker, Philadelphia, Pa.	June 17	702,680
WATER CLOSET FLUSHING TANK OR CISTERN.	A. Knell, Jr., Baltimore, Md.	June 24	703,136

TOOLS.

PLANE.	Stanley & Walter, New Britain, Conn.	June 24	703,158
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ANDIRONS.

THE andirons with crane attached constitute one of the many styles of andirons made in black iron. Of andirons in general more are sold now, says a manufacturer, than ever, and they are now made in greater variety than ever—in almost endless variety, in fact—and, besides, there are more or less andirons now made to order to conform to the style of decoration of the room in which they are used. Andirons are used nowadays not only for wood fires but with the modern gas logs.

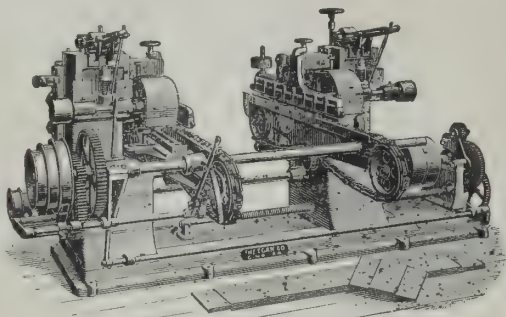
Andirons are made of iron, brass, bronze, and onyx, and, as to style, in Empire, Renaissance, the Louis periods, Colonial, and so on, in many variations.

There are andirons that are just andirons, made in their simplest form, there are andirons quaint and curious, and andirons stately and dignified, andirons all spindle-shanked and bulbous, grotesque, and andirons that are artistic and beautiful, andirons of all sorts and sizes.

Publishers' Department

AN AUTOMATIC DOUBLE TENONING MACHINE.

WE are pleased to show our readers one of the most improved tenoners yet placed on the market. It is especially designed to meet the requirements of sash, door, blind, crate, furniture, wagon, and buggy factories, and in all establishments having double tenons to do. The J. A. Fay & Egan Company, at 209 to 229 West Front Street, Cincinnati, Ohio, the makers of this machine, have brought the tenoner to its present state of mechanical perfection by the great improvement of placing the cut-off saws in front, and the contrivance is so clean, accurate, speedy, and economic in its work that it should soon become very popular. The device is entirely new, simple in operation, requires no expert to run it, and is not liable to get out of order. It will work 6 to 78 inches between shoulders of tenons, and to 20 inches wide or 7 inches thick. As it calls for a double-end tenoner to make perfect and accurate tenons, the worth of the machine will be readily understood. It will cut-off, tenon, and cope both ends at one operation, correctly and rapidly, and without marking the work. The machine rests



PATENT DOUBLE TENONER.

ing on a firm platen or base, insures solid support, stiffness, perfect smoothness, and freedom from vibration. The feed is of improved construction, automatic, and capable of standing much wear. Arrangement is made for working different widths and thicknesses. It may be used as a double cut-off saw, the saws being adjustable vertically and horizontally. The company will send a new and complete catalogue to any one wishing illustrations and descriptions of all their machines.

STEEL ROLLING DOORS AND SHUTTERS.

AN important instance of the progress of American standards is just shown in the steel rolling door and shutter industry. In the rebuilding of the Royal Warehouses in Antwerp, Belgium, the Belgian Government has awarded to the Kinnear Manufacturing Company, of Columbus, Ohio, the contract for four hundred and twenty-two "Kinnear" steel rolling doors. This group of warehouses is considered one of the finest in Europe. The scope of the company's dealings in large contracts may be seen in the recent award for the furnishing and installation of one hundred and seventy-nine steel rolling shutters on the Washington Arcade Building, Detroit, and the just completed installation of seven hundred and thirty steel rolling shutters on the structure of the Connecticut Mutual Life Insurance Company, at Hartford. These latter shutters, with their copper hoods, make an excellent appearance. The compact construction, durability, finish, fireproof qualities, and ease and speed of operation of the "Kinnear" doors and shutters have given them a world wide adoption, notably in buildings of great dimensions. Many prominent mills, factories, depots, plants, warehouses, freight docks, business houses, residences, etc., throughout the country are fully equipped with these devices. The works seem to have the capacity to turn out any sized door that may be needed, judging by a single door covering an opening thirty-five feet six inches wide by twenty feet high, made for the Worcester, Mass. car-house. Any size shutter can also be made, even down to a transom bar. Aside from these doors and shutters this firm is the maker of the "Kinnear Trolley Wire Connection."

METAL SKYLIGHTS.

SKYLIGHTS are now made as tight as a drum. The use of metal insures strong and graceful construction, durability and protection, and the less bulky the material employed the greater the flood of light admitted. The advancement over the old-fashioned styles is very marked in many ways, and now all varieties of roofs may be safely and ornamentally furnished with these improved frames, which are kept in stock or made

in special kinds and sizes by the G. Drouve Company, of Bridgeport, Conn. The "sweat gutter" in all the Drouve metal skylights carries off any inside condensation.

SIMPLE LOCK FOR COTTAGE LATCH.

BY a simple and ingenious arrangement of parts Mr. James L. Coulter, of Bovina Center, N. Y., has provided a lock attachment for the ordinary cottage-latch whereby the latter can not be opened without the application of a key. The latch, which is mounted in a casing and works as usual with a keeper on the door frame, is provided with two notches or recesses near its pivoted end. These recesses are adapted to be engaged by a finger of a tumbler which lies in a casing above the latch and which has a forward extension lying on top of the latch. When the latch is in its lowest position this extension may be moved forward and wedged between the latch and one of the screws which holds the casing to the door, thus locking the latch in place. When in this position the finger of the tumbler engages the forward notch on the latch and the tumbler can not be dislodged except by the application of the key. The key lifts the finger out of this notch and unlocks the latch by moving the tumbler back until it engages the rear notch, then by operating the ordinary thumb plate, the latch may be raised and the door opened. A thumb piece on the tumbler projects through an opening in the top of the casing and affords means whereby the lock may be operated manually from within whenever desired. Mr. Coulter has recently received a patent on this device.

THE MODERN GREENHOUSE.

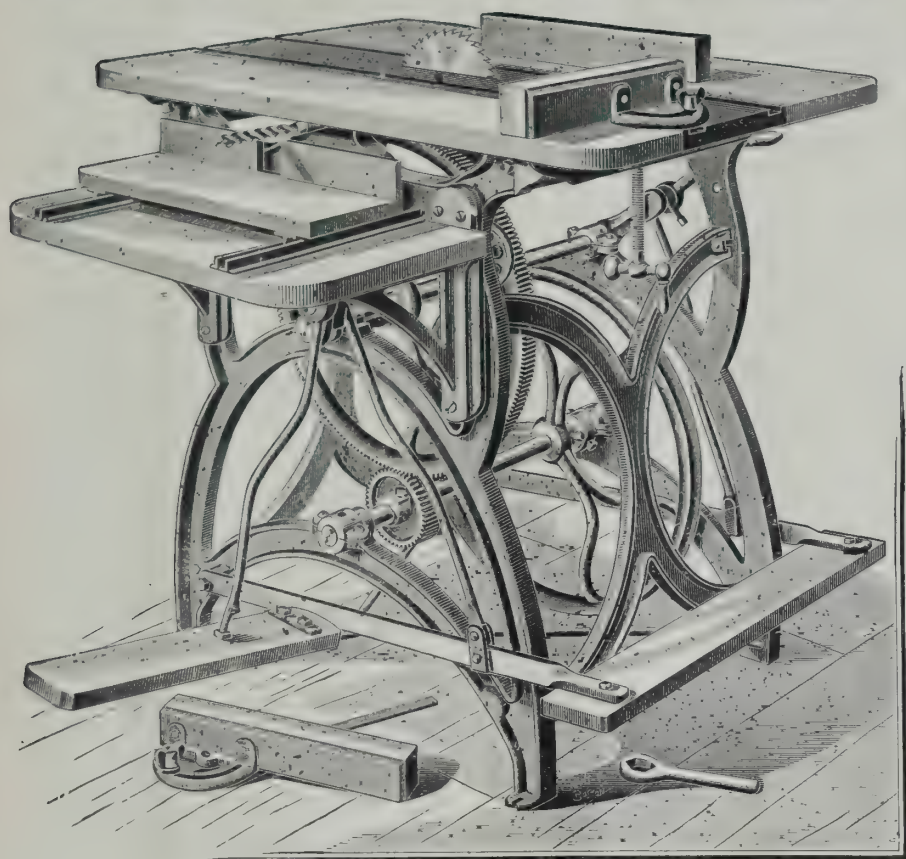
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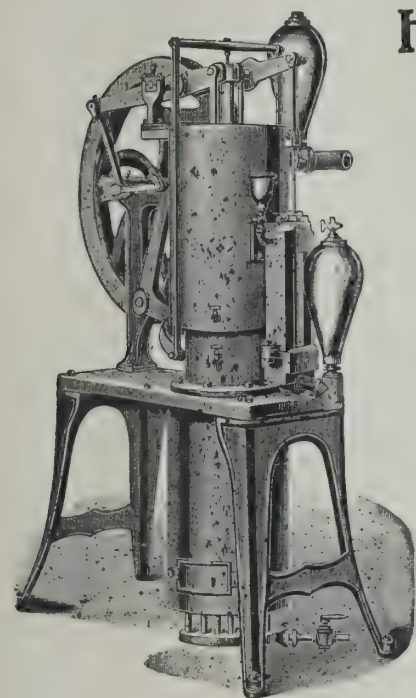
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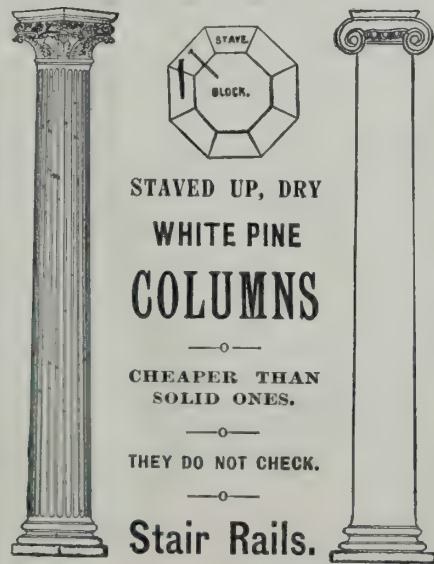
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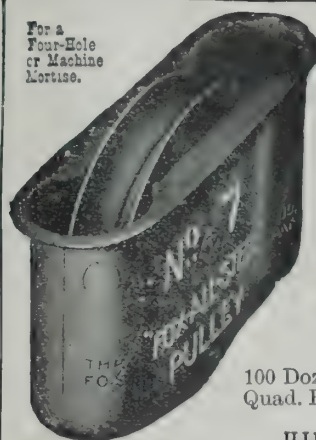
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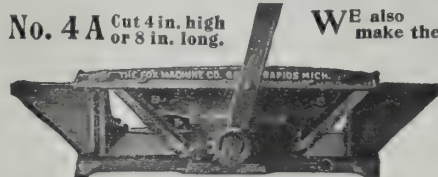
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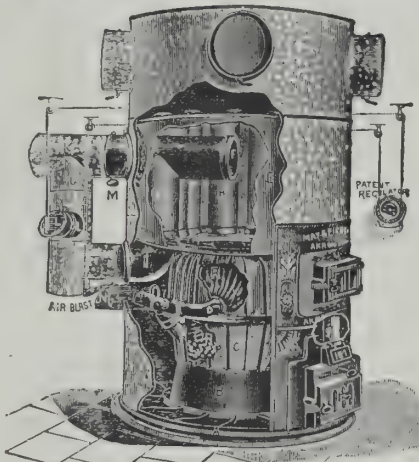
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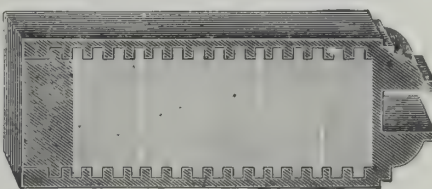
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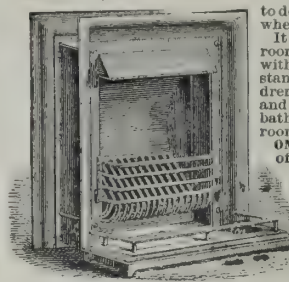
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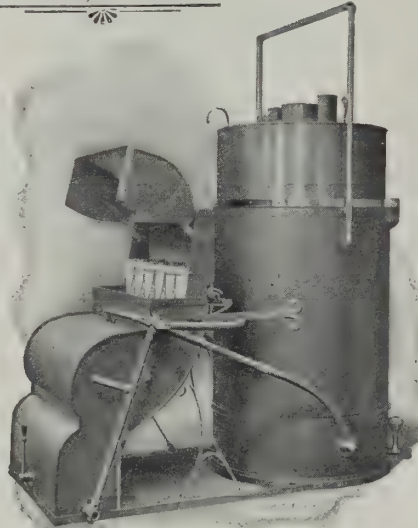
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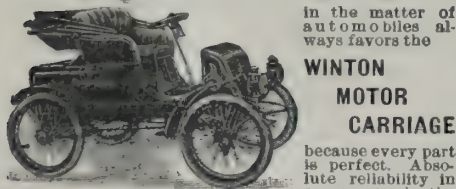
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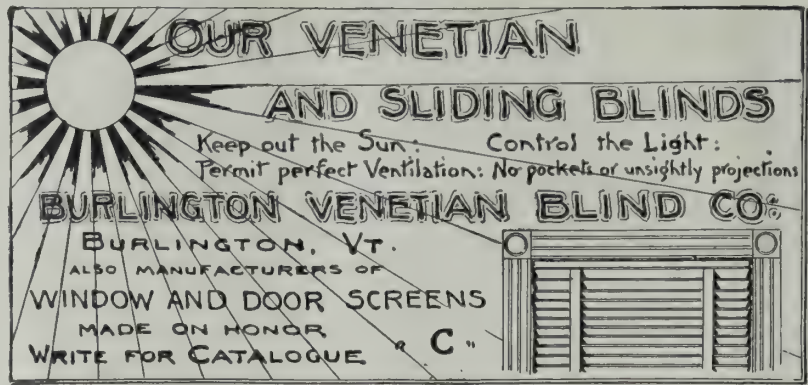
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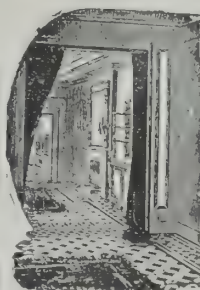
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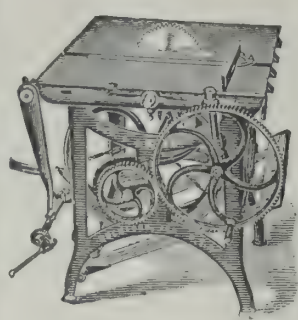
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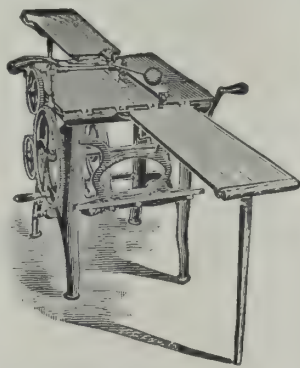
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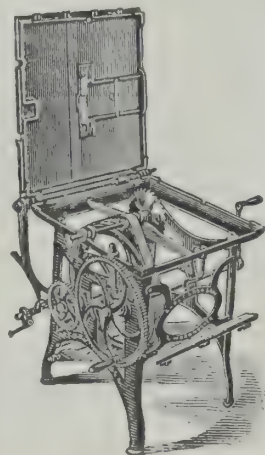
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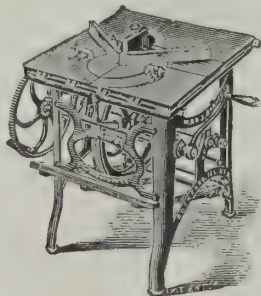
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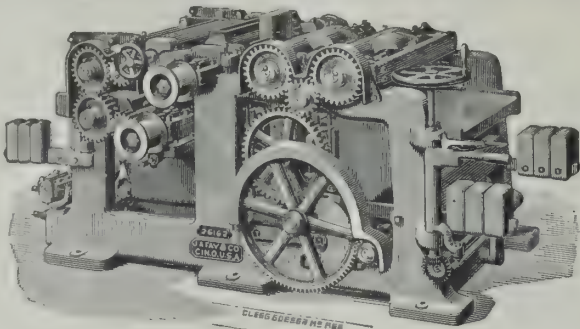
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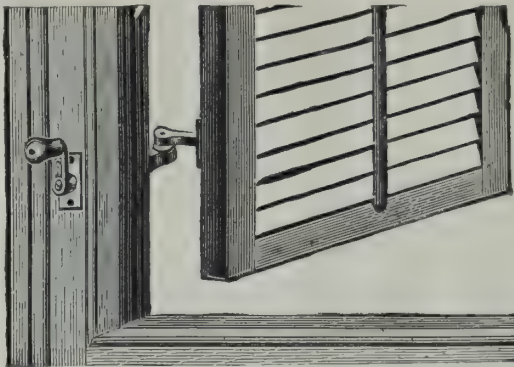


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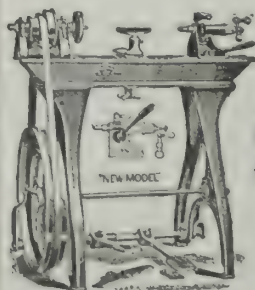
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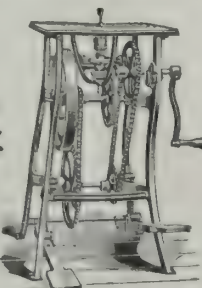
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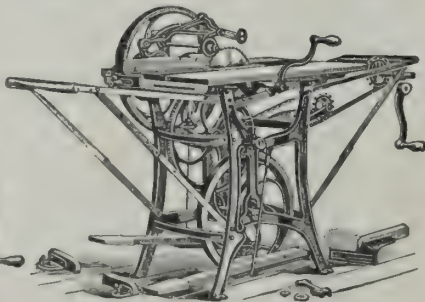
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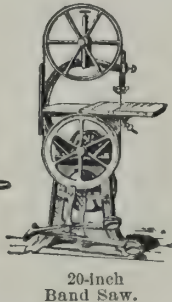
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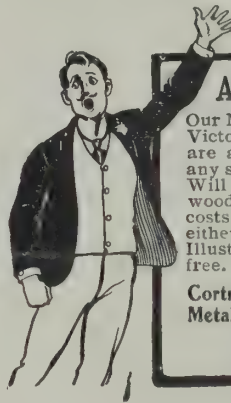


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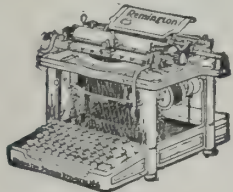


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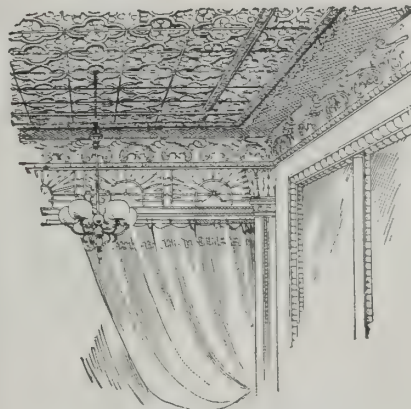
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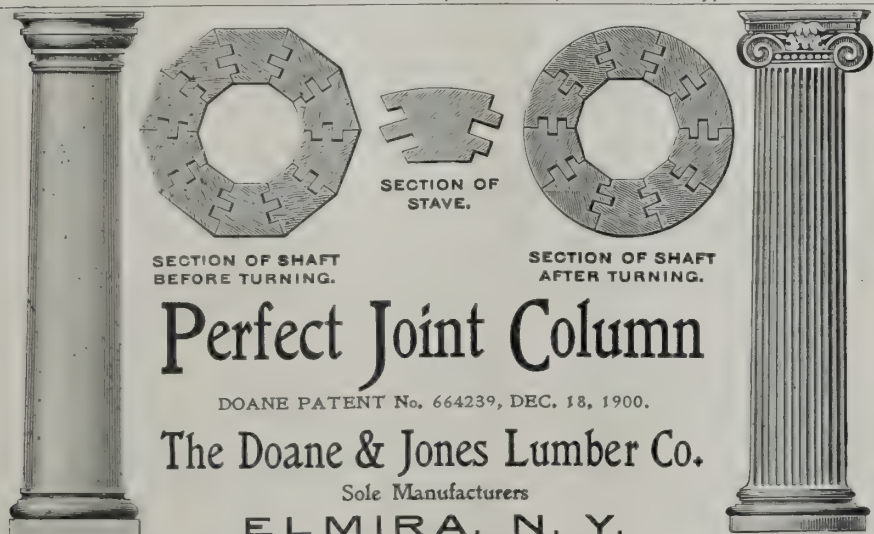
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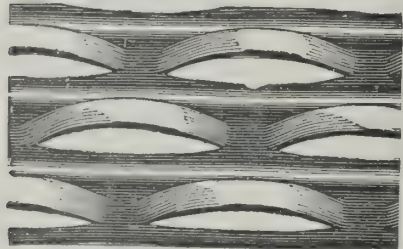
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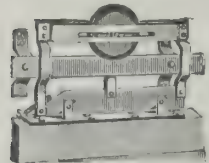
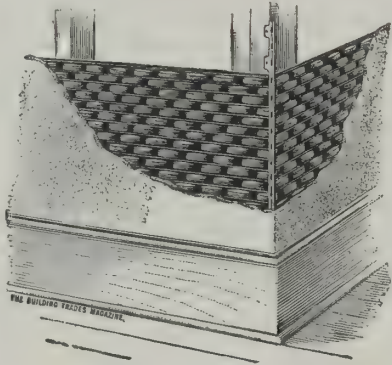
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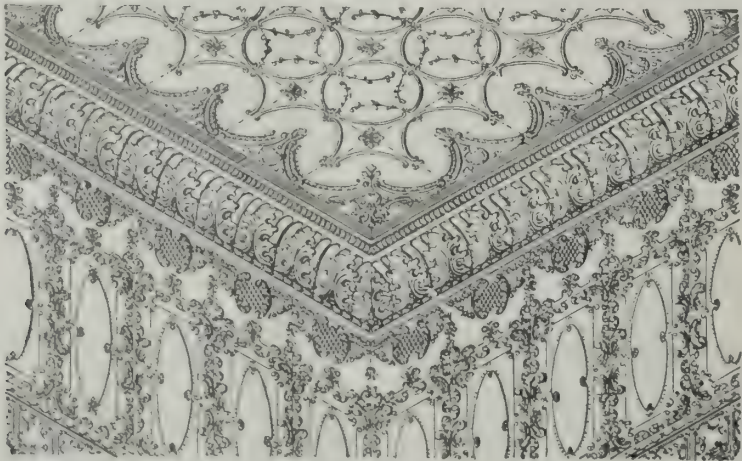
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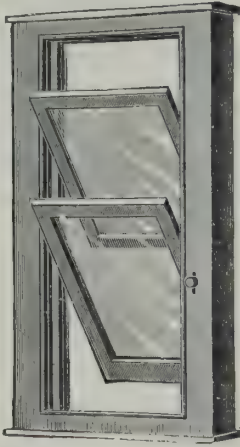
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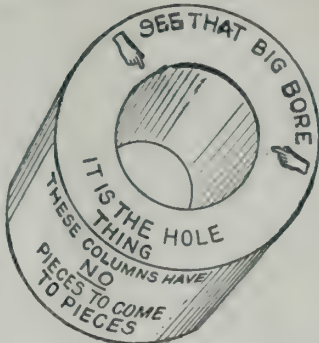
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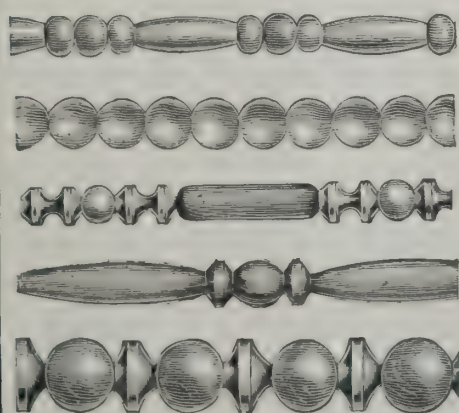
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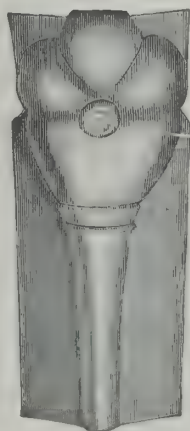
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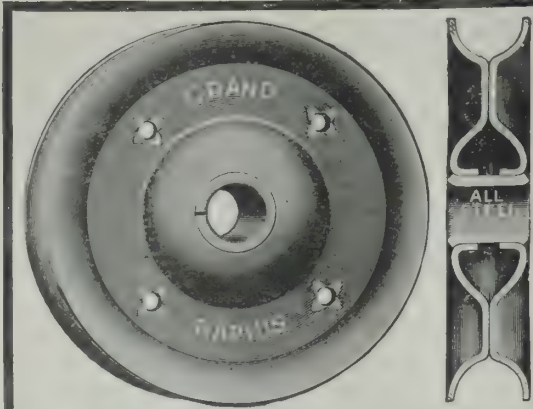
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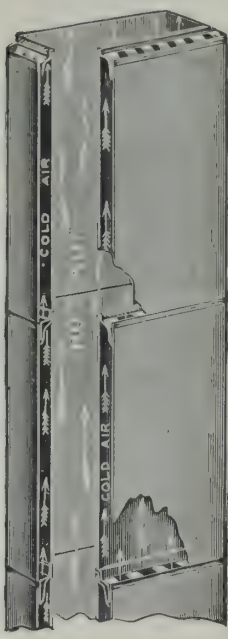
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No. 203

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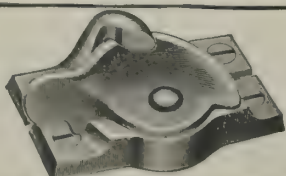
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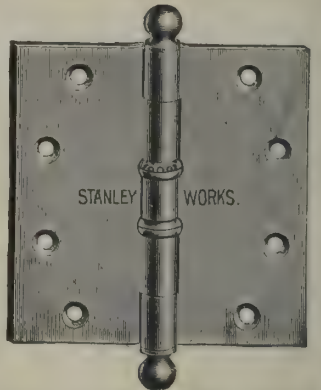
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SCIENTIFIC AMERICAN

Building Monthly.

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NEW YORK, SEPTEMBER, 1902.

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ENTRANCE HALL (UPPER PORTION.)

PROPOSED RESIDENCE OF CHARLES M. SCHWAB, RIVERSIDE DRIVE, NEW YORK.—See page 43.
MR. MAURICE HÉBERT, ARCHITECT.

SCIENTIFIC AMERICAN BUILDING MONTHLY

ESTABLISHED 1885

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NEW YORK, SEPTEMBER, 1902

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MONTHLY COMMENT.

DURING the past three or four years considerable attention has been directed toward the operations of large construction companies, which have undertaken vast building work, and become a new and important feature in all great real estate speculations. The announcement of the formation of a gigantic realty "trust" which will bring a number of the larger of these corporations into one organization is perhaps only a natural development, but it is certainly one of the most notable and momentous events in building and real estate circles of the current year. It is true enough that large building operations now require much more capital than was needed in the lesser operations of a few years since, large as many of them appeared to be at the time. Many economies can, doubtless, be effected by the new corporation, and the whole aspect of the real estate field considerably modified.

One feature of the new movement that has escaped public comment has been its probable effect on architects. This is likely to be very marked and decidedly disadvantageous. Before the advent of the construction companies the architects were masters of the building field. To their care was committed the erection of the high office buildings now so marked a feature of American cities. They both designed the buildings and superintended the construction. They awarded all contracts, and turned the finished structure over to its owners. They gained large fees, the commission on a million dollar building being fifty thousand dollars, and on higher priced edifices in proportion. As any architect felt himself competent to carry on the work for several of these buildings at the same time, and not a few of them actually did so within a single year, the profits were very large, and architecture became an exceedingly well paid profession.

All this is now likely to be changed. Instead of the architects bossing the construction companies, the

companies will now boss the architect. The companies take the contract for the erection of the building; they make the sub-contracts; they pay the bills; they hire the architect. It will readily be seen that, if an architect is content to design and superintend for five per cent., he can not expect the same generous commission when he simply designs, and designs, moreover, for a master whose building facilities are infinitely greater than any he himself, in his most halcyon days, could command. The architect, from being a most important person, becomes of little account, and may be dispensed with entirely; for a large company can engage the services of a whole corps of architects for much less than the sum previously paid the single designer.

It would seem, therefore, as though the chief source of the architect's profits—the high building and large structure of any kind—was about to be cut away from him. It is just what might have been expected, and yet it seems strange that the architects as a body have not thought of this possibility and have failed to take steps to protect themselves against so damaging a change in building methods. The results of the new movement are likely to be very marked from the point of view of architectural art. Will our large buildings improve in artistic qualities? There is no hint of this from present operations, and it does not seem likely to happen. And what will the architects do, now they have lost their best-paying jobs? The last is, perhaps, an academic question, for architects, as a rule, have looked well after their own interests in the past, and may be expected to do so quite as well in the future. But it is at least obvious that the architects, if they would retain their position as masters of the building art, must give more attention to the art side of their buildings than they have done heretofore. If the promoter finds he can get better art and more of it from the architect than from the construction corporation, the former will win. It would seem as though the time were close at hand when the architect must point to his buildings as real works of art, and not as so many jobs turned out within a narrow restriction of time.

Have architectural societies any real professional value? Apparently not, if a decision by the Court of Common Pleas of Philadelphia is sound law. A certain member of the Philadelphia Chapter of the American Institute of Architects of that city took part in a competition the terms of which had been condemned by the Chapter, which adopted a resolution making participation in the competition an unprofessional act. He was duly expelled, and then sought restitution through the courts. It was contended, on his behalf, that the Chapter only possessed powers expressed in its charter alone, and that these had been exceeded by the adoption of the prohibitory resolution—a view in which the court coincided. The matter is chiefly of interest in showing the thoroughly unpractical value of architectural organizations as professional bodies. That this is so must long have been evident to every one familiar with such bodies. It is regrettable that they should have no professional value—value, that is, in insisting on professional ethics, a violation of which could be met with punishment—and perhaps it is just as well that the emptiness of these organizations should be shown up in the courts. Architectural societies have, no doubt, their field of usefulness, but they have been very far from accomplishing all their admirers and adherents have imagined they were doing.

A "popular" magazine, in exploiting the "luxuries of the millionaire," devotes a chapter to his homes. Truly it is no discredit to a millionaire to possess a home, or a dozen of them, if it pleases him. The more he has, the more splendid they are, the more lavishly finished and more sumptuously adorned, the better it is for the architect and the better for American art, or at least it should be; though it is but fair to remark that the American artist and the American art industries do not receive the support the millionaire might naturally be expected to give them. This, however, may come in time; meanwhile, it is well to keep in mind the self-evident fact that it is no crime to possess a splendid home, but, on the contrary, a distinct benefit to the community in which it is erected.

THE ARTS AND THE HOUSE.

THE notable series of conversations with architects and artists which have been appearing in these pages for some time past have contained no more fruitful suggestions than those from Mr. F. Wellington Ruckstuhl, which are printed in another column. Mr. Ruckstuhl speaks with all the enthusiasm of an artist, and makes his suggestions concerning the use of sculpture in the house as the result of a long experience in endeavor, which in many cases has been crowned with conspicuous success.

If a house is not finished until it has been furnished, it is not less true that it is incomplete until its artistic

addenda have been carefully considered and put in place. These may be in the form of painted decoration or of sculpture, as Mr. Ruckstuhl suggests, or, perhaps more usually, consist of bric-à-brac and lesser artistic objects, many of which may be small in themselves, and yet each contributes its own note to the furnished room.

The selection of household ornaments is, in truth, a matter requiring the utmost care and the most painstaking discrimination. A real work of art will never spoil a room, though it may be out of place in it. And if its character is sufficiently marked, if it be indeed a work of beauty and of art, if it rises supreme above its surroundings, its immediate effect on persons of taste will be a transformation of the apartment in which it is placed, until the whole room is beautiful and harmonious. In other words, the effect of association is not less marked among inanimate objects than among people in general. A good work of art may often serve as a real object lesson, and leaven a whole household of incongruity and insipidity.

The household ornaments have, therefore, a real value and a definite use in creating the atmosphere of rest and beauty, which should be the characteristic of every house. Everything that tends to make a house more beautiful, in so far as it does not create discomfort or diminish the livableness of the dwelling, is an object of real utility, though in itself it may have no quality of actual use and is only intended to be seen.

But, surely, it is no crime to have in our houses objects which are simply to be looked at. Taste and beauty are employed in the structure of the dwelling for no other purpose. Gardens are cultivated and grown for the same reason. The wall coverings, curtains, carpets, and furniture are chosen because one pattern or one style seems more agreeable than another. Why not, then, our vases and pictures, our plates and paintings, our bric-à-brac and the many lesser articles, playthings in a sense, and yet each helping to make the home beautiful?

It is a most mistaken notion to imagine that one should have in the house only objects of exacting utility. It is not the useful articles which make the home, but the unuseful things, the objects of ornament and beauty, which give character and life to a room, and which bespeak in eloquent language the taste, or the lack of it, with which the occupant may be endowed. The articles of furniture actually needed for a house are comparatively few. A table and chairs for the sitting-room, another table and more chairs for the dining-room, a bed and a washstand for the bedroom, with perhaps a dressing table. What more is needed? Take out of any room everything that is not actually an object of necessary utility and note the result. An incredible bareness and chilliness, a barrenness and vacancy, a dreariness as of sweeping days, a vacancy of emptiness.

The writer of these words was once shown the living room of a priest in a French monastery. The good father pointed out with pride its little bed, the single chair beside it, the crucifix with a kneeling stool before it, the washstand, and the single hook for his soutane. "What more," he ingenuously asked, "could one need?" In truth the necessities were here, and he doubtless knew nothing else; but this bare little room contained no suggestions of a joyous life; it was barely restful in its barrenness.

The healthy man and woman of the world crave more than mere necessities in the home. One needs life and color, one requires suggestion and longs for remembrances of other things. One's ornaments should be part of one's self, gratifying some wholesome desire, pleasing and beautiful.

The selection of household ornaments is, of course, a matter of extreme difficulty. One can not always determine what one possesses. Indiscriminate friends may have tastes that differ from ours, and burden us with gifts that one would fain not be burdened with. The disposition of such ornaments then becomes an ethical question on which no suggestion can be made. It may be even too painful to be thought of.

Other people do not know good ornaments from bad, and the very best intentions may be frustrated because bad things are chosen when good ones are desired. Too many ornaments are as bad as none at all, and if they are bad in themselves the final result may be very depressing. Three general rules seem obvious:

1. Avoid the commonplace.
2. If you do not know what is good, ask some one in whose judgment you have confidence.
3. When in doubt, don't buy.

Ornaments artistically employed is the golden rule. Do not overcrowd the room. Do not seek to make a collection without any idea of how to collect. Do not buy a thing because it is cheap and with no other qualities. Be sure that each piece of ornament is good and that it is just what is wanted, and it must be helpful in adding to the embellishment of the home. The arts have a definite place in the home, and they will give more joy and pleasure than can be measured by many times the money spent on them.

THE PROPOSED NEW YORK RESIDENCE OF CHARLES M. SCHWAB.

FROM time immemorial the building of great houses by men of large wealth has been one of the most seductive and notable of human occupations. New York possesses a number of notable private dwellings, some of them large enough and stately enough to be called palaces in more picturesque lands than ours, and there seems to be hardly a limit to the number of such buildings which may ultimately be erected in the metropolis. The new dwelling that Mr. Schwab is about to build for himself will surely rank among the most interesting great houses of New York. It is estimated to cost \$8,000,000.

Occupying an entire block of land on Riverside Drive, between Seventy-third and Seventy-fourth Streets, Mr. Schwab's house will cover an area of 75 x 150 feet in the center of a lot 200 x 400 feet. It will be surrounded by large terraces, lawns, and gardens, permitting a good view of the architectural grouping and affording a wonderful view of the matchless scenery of the Hudson River.

The house is designed in the transitional period of

from the interior of Château of Blois. The main hall is two and a half stories high and is surrounded by a circular gallery and arcade, which leads to all the principal rooms of the second floor and to the Chapel, which contains a large organ and has art-decorated glass windows, which can be seen from the entrance hall.

The library, which is Henri II., is taken from Fontainebleau, and the mantel of the celebrated Gallery Henri II. is adapted to its composition.

The parlor is Louis XVI., and taken from the Petit Trianon, with the introduction of tapestry panels designed by Boucher.

The dining-room is Louis XIV. and will be decorated with Gobelins tapestries, representing the Four Seasons and Autumn. A large conservatory has been arranged to form part of the dining-room.

The art gallery, which occupies the entire northeast wing, will be one of the most beautiful rooms of the house, with Louis XIV. decorations.

The smoking-room is Flemish, the breakfast-room Louis XIII., and the billiard-room Henri IV.

The rooms of the second floor are to be finely ex-

TALKS WITH ARTISTS

MR. F. WELLINGTON RUCKSTUHL ON SCULPTURE FOR THE HOME.

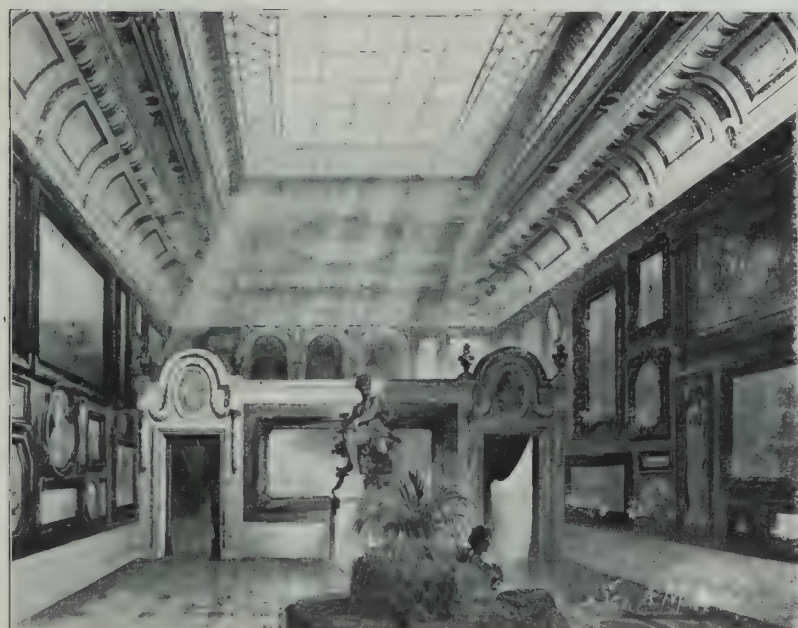
MR. RUCKSTUHL easily ranks among the foremost sculptors of America. Brought up in St. Louis, which possesses his fine bronze group of "Mercury teasing the eagle of Jupiter"—one of the few pieces of ideal public sculpture in this country—the larger part of his professional life has been passed in New York, where he has won fame both as a sculptor of merit and a man of abounding activities and public usefulness. Few men in any walk of life have accomplished as much for their profession as Mr. Ruckstuhl has for sculpture, and no record of contemporary art and contemporary artists would be complete that did not award a generous amount of space to him and his work. This has included, among many minor works—busts, bas-reliefs and the like—a marble statue, "Evening," now in the Metropolitan Museum, New York; "Victory," heroic, bronze, for the Soldiers' Monument in Jamaica, Long Island; "Solon," bronze, for the Library of Congress, Washington; "Hartranft," equestrian statue for



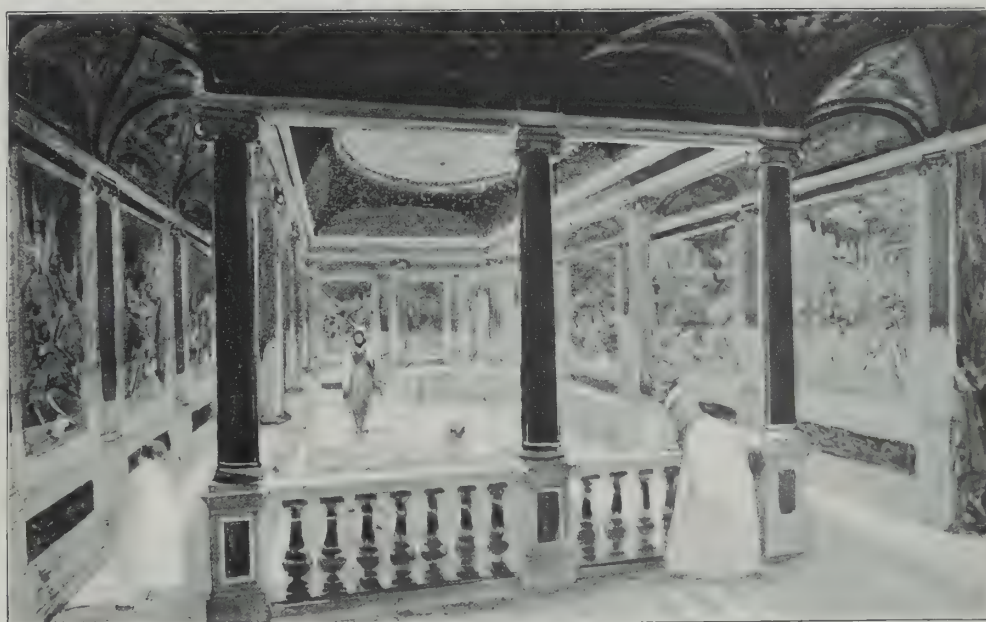
LIBRARY, HENRY II. STYLE—CEILING, OLD IVORY.



DECORATIVE TAPESTRY PANEL FOR DINING-ROOM, ENTITLED "AUTUMN," BY ARTHUR THOMAS.



ART GALLERY, LOUIS XIV. STYLE.—CEILING PLASTER DECORATION IN OLD IVORY.



NATATORIUM.—DECORATIVE PAINTINGS ON SIDE WALLS.

INTERIORS, PROPOSED RESIDENCE OF CHARLES M. SCHWAB.

the French Renaissance, one of the richest and most beautiful of all styles of architecture. Historical precedence has been freely borrowed, as is properly the case when an historical style is followed consistently. Reminiscences of the châteaux of Castle Chenonceaux, Blois and Azay-le-Rideau appear in the design, which is at once stately and dignified, picturesque and interesting.

The framework or backbone of the building is to be made of structural steel in special shapes, to conform to the plans, while the outer portion will be cream granite and stone surmounted by dark blue slate-colored roofs. The house will be four stories in height, the first containing the rooms for entertainment, the second the principal bedrooms, the third the guests' rooms, the fourth the servants' rooms. The kitchen and pantries are placed in the wing facing Seventy-third Street; the equipment for heating, cooling, ventilating, and electricity being placed in a small building facing this street and arranged to appear to be a continuation of the terrace system. The interior of the house is elaborately designed and richly finished, without, however, overlooking the fact that the building is a home and intended as a place of daily residence.

The main hall, staircase, and reception hall are François I., the keynote for this composition being

cuted in Louis XVI. style, while the rooms of the third floor are to be in style Régence.

The basement of the building is so arranged as to be at level with the service entrance gate and located on Seventy-third Street, which leads to kitchen, pantries, and other dependencies of service.

A large natatorium, situated under the court, forms part of a Turkish bath system, and is connected with a large gymnasium and bowling alley.

The main decorative feature of all the principal rooms will be executed by well-known artists, who are now at work in the studios and designing rooms of Wm. Baumgarten & Co.

Arthur Thomas is executing the cartoons for the dining-room tapestries. Maurice Hébert is the architect, who visited Europe in Mr. Schwab's behalf to secure ideas in regard to the style of architecture to be used.

The illustrations on pages 41, 44, 45, prepared from photographs of the colored designs which have been accepted by Mr. Schwab, convey an excellent idea of the beautiful decorative character of the interiors, and the excellence of the proportions of the various features of the exterior. We are informed that a carefully proportioned model showing every detail of the building was made, prior to the acceptance of the plans.

Harrisburg, Pa.; "Force" and "Wisdom," colossal marble statues for the Appellate Court House, New York, and a group, the "Spirit of the Confederacy," which will shortly be erected in Baltimore.

We had spent a day together, looking at books and photographs, and talking a multitude of things on many aspects of art. I finally turned the conversation toward the relation of sculpture to the private house, and asked Mr. Ruckstuhl how far he thought there was opportunity for its employment, and to what extent the individual might be expected to encourage sculpture by using it in his home.

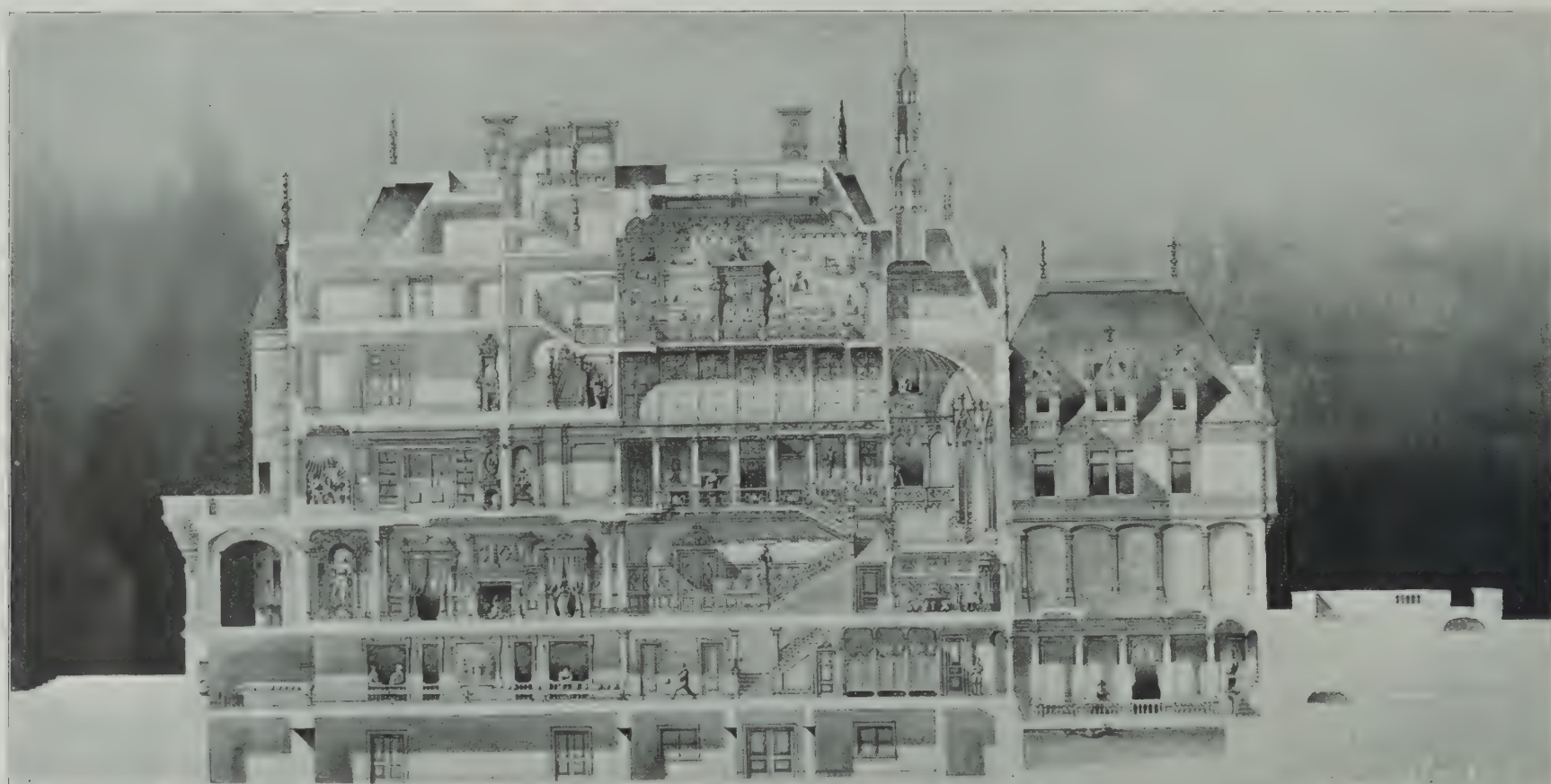
"Private houses," he said in reply, "should have more sculpture than a public building. The private house ought to be an expression of the owner's personal character and temperament; but, whether it ought to have or not, it at least becomes interesting to an outsider, interesting to the public apart from its architectural elements in the ratio of its expressing the individuality of the man who lives in it or who owns it.

"To express any individuality at all in the building there are only three elements—architectural forms, painting, and sculpture. Painting as an element of expression is not sufficiently durable; therefore, the

(Continued on page 56.)



RIVERSIDE DRIVE AND SEVENTY-THIRD STREET FRONTS.



LONGITUDINAL SECTION.

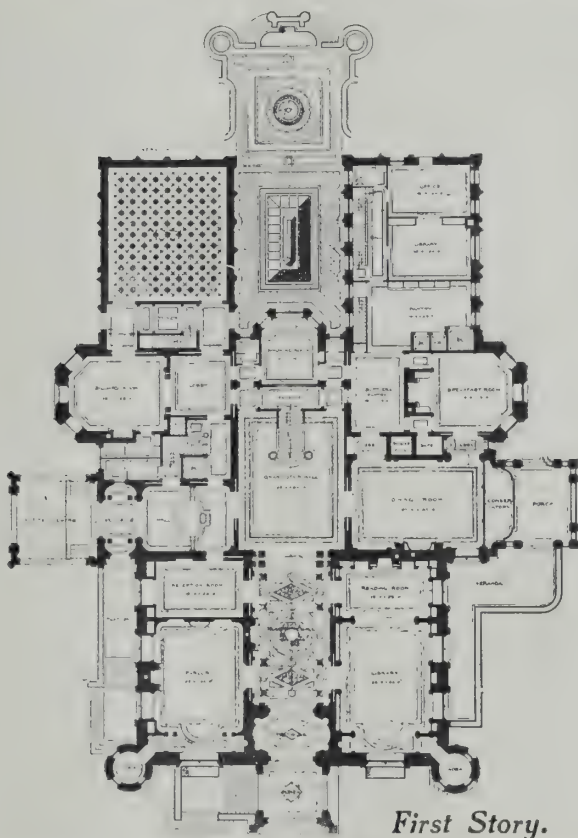


THE REAR FAÇADE, SHOWING PALISADES IN DISTANCE.
 PROPOSED RESIDENCE OF CHARLES M. SCHWAB.—See page 43.

MR. MAURICE HÉBERT, ARCHITECT.



TAPESTRY WALL PANELS BY BOUCHER—PARLOR.



First Story.



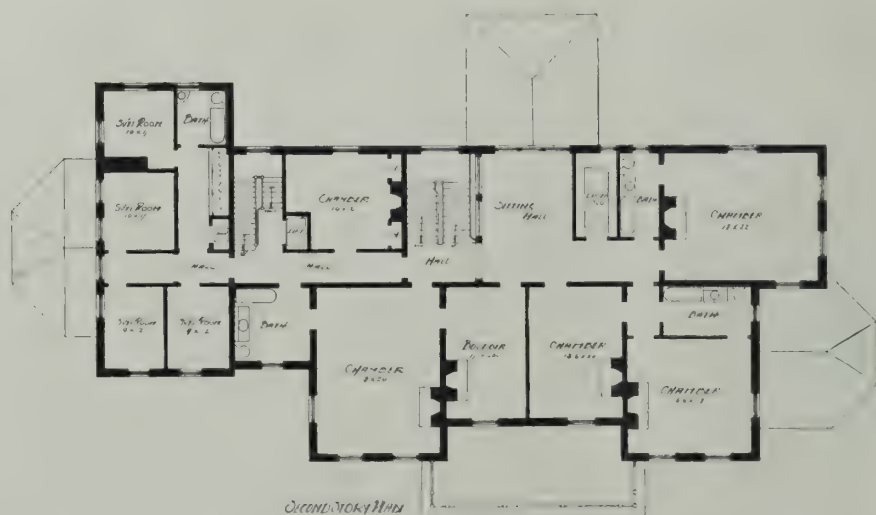
Second Story.



TAPESTRY WALL PANELS AND MANTEL DESIGN, LOUIS XIV. STYLE, BY THOMAS—DINING-ROOM.

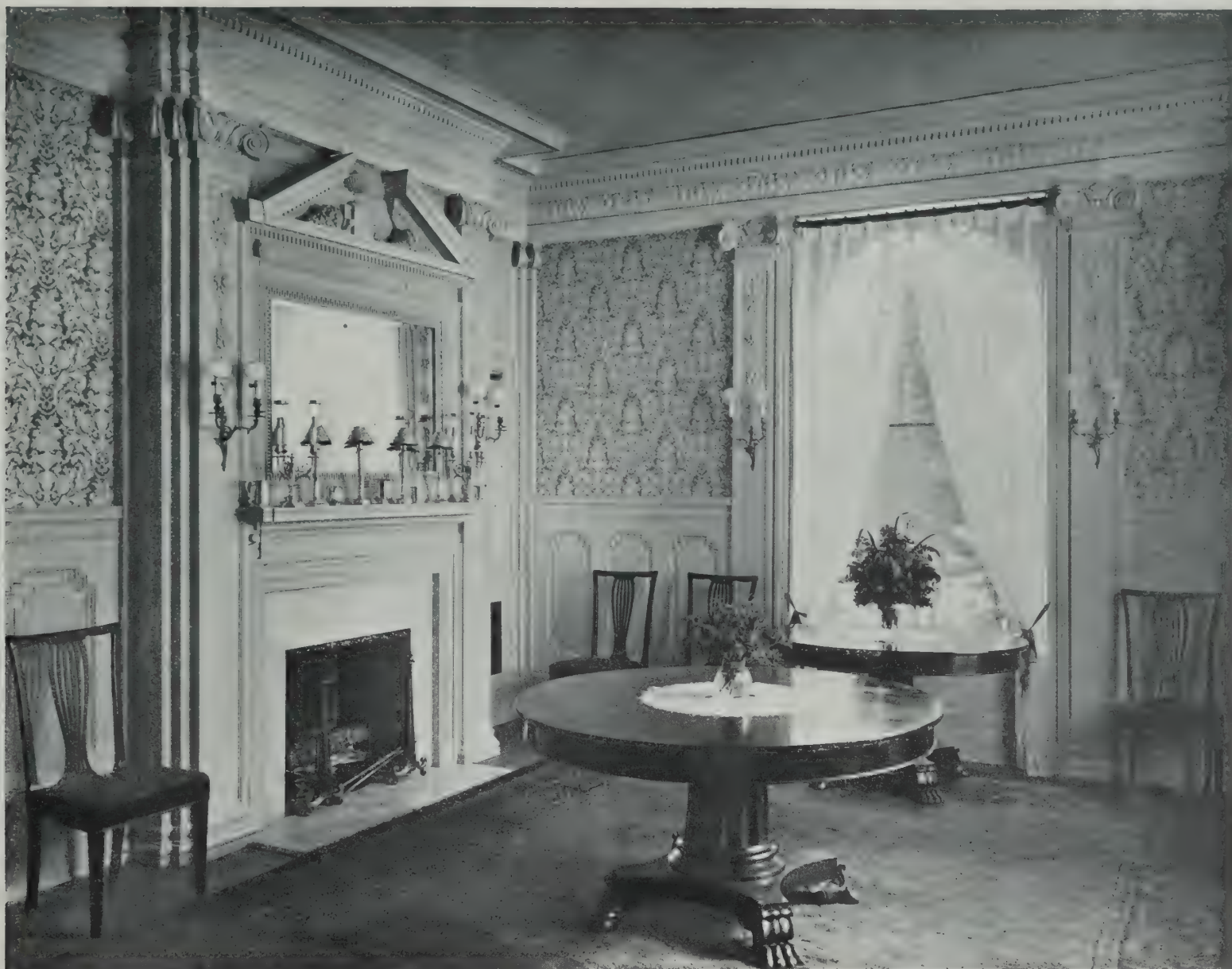
PROPOSED RESIDENCE OF CHARLES M. SCHWAB.—See page 43.

MR. MAURICE HÉBERT, ARCHITECT.



A RESIDENCE AT TUXEDO, N. Y.—See page 57.

MR. BRUCE PRICE, ARCHITECT.



VIEW OF DINING-ROOM.

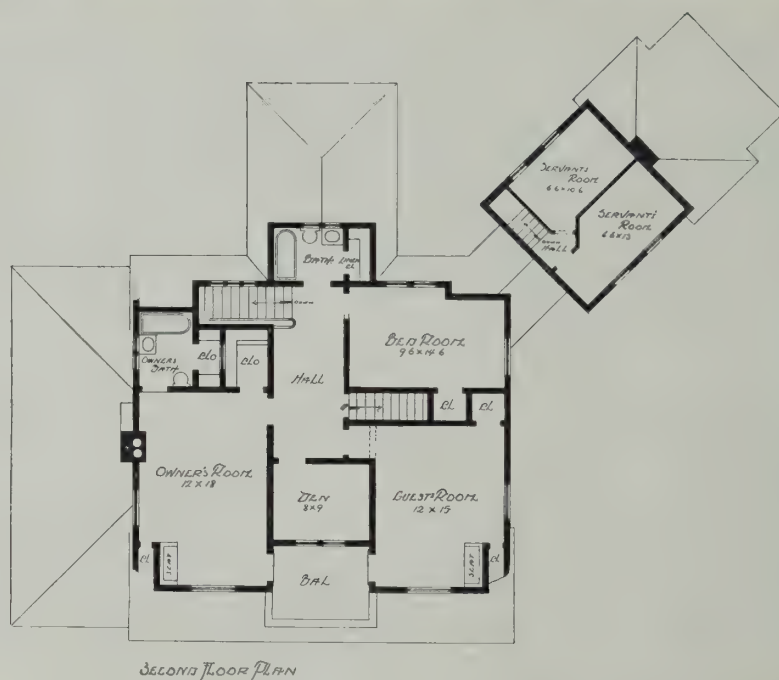
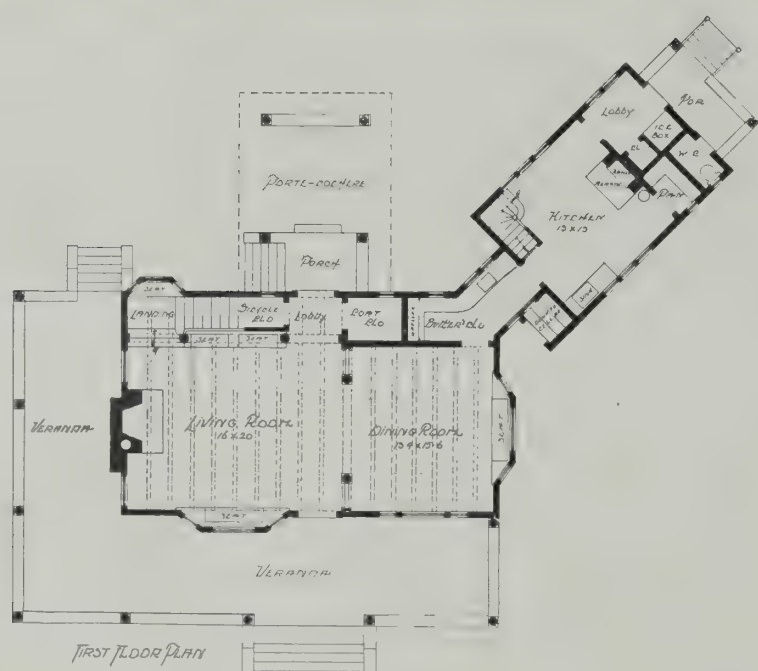


VIEW OF LIVING-ROOM.

A RESIDENCE AT TUXEDO, N. Y.—See page 57.

MR. BRUCE PRICE, ARCHITECT.

BOSTON
PUBLIC
LIBRARY



"THE ANCHORAGE," THE SUMMER HOME OF J. PERCY BARTRAM, ESQ., AT BLACK ROCK, CONN.—See page 59.

MR. FRANCIS DURANDO NICHOLS, ARCHITECT.



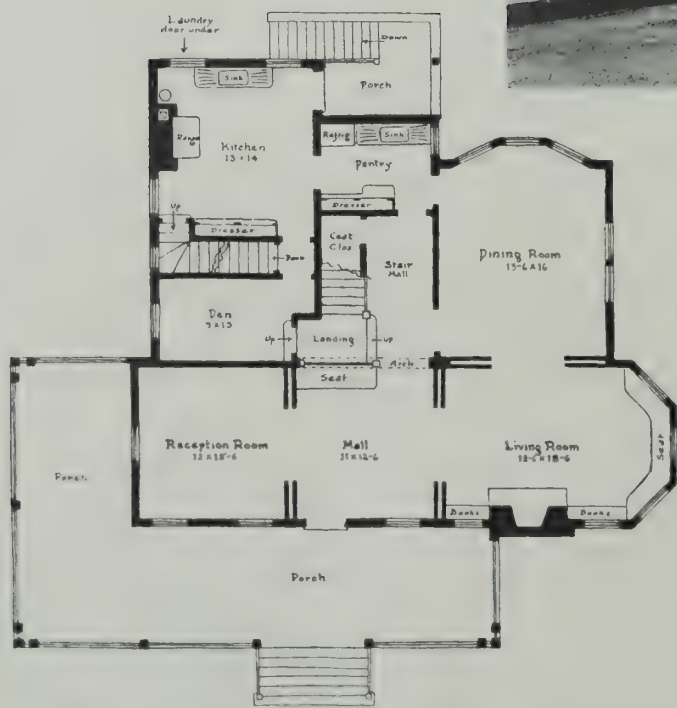
DINING-ROOM.



LIVING-ROOM.

"THE ANCHORAGE," THE SUMMER HOME OF J. PERCY BARTRAM, ESQ., AT BLACK ROCK, CONN.—See page 59.

MR. FRANCIS DURANDO NICHOLS, ARCHITECT.



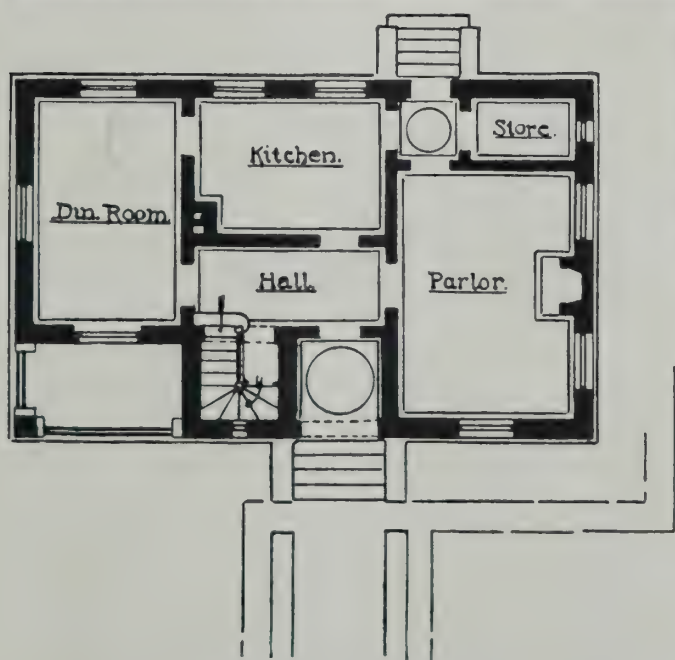
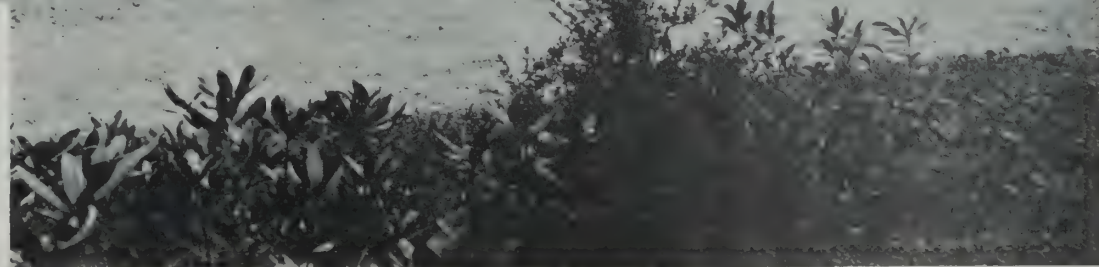
First Floor Plan



Second Floor Plan

AN INEXPENSIVE RESIDENCE AT WAYNE, PA.—See page 59.

MR. DAVID KNICKERBACKER BOYD, ARCHITECT.



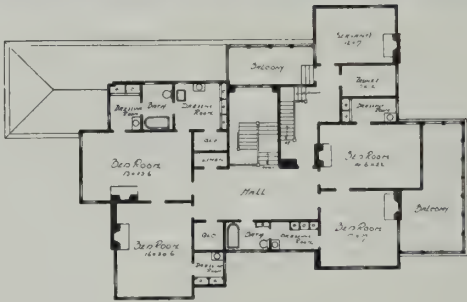
THE GARDENER'S COTTAGE OF MRS. ELLIOTT F. SHEPARD, SCARBOROUGH, N. Y.—See page 58.

MR. ABNER J. HAYDEL, ARCHITECT.





HALLWAY.



SECOND FLOOR



NORTH SIDE.

A RESIDENCE AT ATLANTA, GA.—See page 58.

MR. W. T. DOWNING, ARCHITECT.



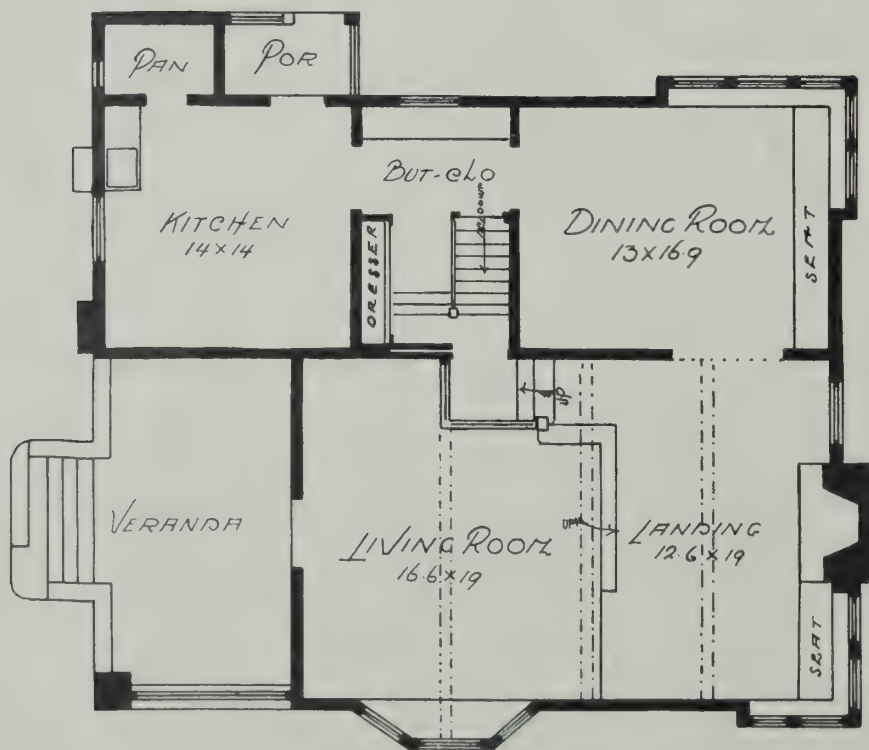
DETAIL OF THE TERRACE AND LEADED WINDOW.



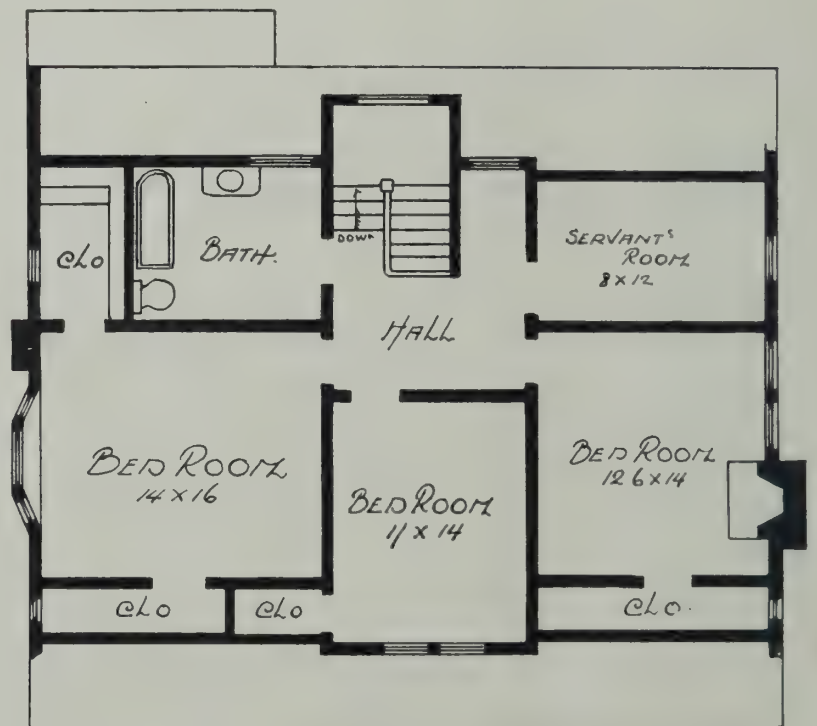
SOUTH SIDE.

A RESIDENCE AT ATLANTA, GA.—See page 58.

MR. W. T. DOWNING, ARCHITECT.



FIRST FLOOR.



SECOND FLOOR

A CALIFORNIA SUMMER COTTAGE.—See page 57.

MR. MAXWELL G. BUGBEE, ARCHITECT.



PORCH AND TERRACE, RESIDENCE OF EDWARD BOK, ESQ., MERION, PA.
MR. WILLIAM L. PRICE, ARCHITECT.



PORCH, "GREEN GABLES," RESIDENCE OF E. N. FOSS, ESQ., COHASSET, MASS.
MR. H. S. FRAZER, ARCHITECT.

MR. F. WELLINGTON RUCKSTUHL ON SCULPTURE FOR THE HOME.

(Continued from page 43.)

most desirable element of expression apart from architectural forms, particularly on exteriors, is sculpture, either in stone, bronze, or terra cotta.

"It may be put as an axiom that, no matter how perfect a building may be architecturally, it becomes vibrant and, so to speak, musical in ratio of its adornment by sculpture, always, of course, within the limits demanded by sane good taste and by harmony. This does not mean that a building should be plastered all over with sculpture; but the amount of sculpture that should adorn a building should be determined by the TASTE of the owner and builder or architect, and not by the question of Cost.

"When I refer to sculpture on a building," continued Mr. Ruckstuhl, "I do not mean alone statues in the round; but I have reference to bas-reliefs, friezes, cartouches, and all ornaments, when carved with sufficient excellence and love, as I may say, to elevate them to the plane of sculpture. And I would consider foliage and architectural detail, when carved beautifully and with individual feeling, as sculpture.

"What I have said of the exterior of a building applies with nearly equal force to the interior, and to isolated as well as to structural sculpture. Mankind regrets the disappearance of those things only which bear evidence of having been created through love and care; and a building which is built simply of ordinary materials, even though carefully built, but lacking evidence of this love and care, disappears without the slightest regret on the part of any one, because it expresses nothing of the mind but especially the soul of those who built it.

"All that I have said applies also very strongly to the environment of the house, or the garden. No garden should be without sculpture, because in a garden there is a larger freedom to express taste and personality than on a building. This is because statues of all kinds and styles in the round, and even bas-reliefs, can be placed more arbitrarily wherever the owner may wish to place them, for the purpose of giving delight to himself and those who may frequent the garden.

"When a man leaves his home to go to business in the city he goes for a purpose which is the opposite of reflection and meditation. He is bent upon accomplishing his purpose, and under our present civilization he is generally so rushed that he has no time to contemplate any piece of sculpture for any length of time, be it in the street or on a building. Therefore, he can not receive the benefit from sculpture on a public building that he would receive from a similar work if placed in or upon his home or in his garden. Thus, while a higher civilization absolutely demands that all of our public buildings as well as private business structures should be ornamented with sculpture, to the limits demanded by good taste and harmony, in order to give a city in its entirety a general atmosphere of splendor and beauty which the rushed and harassed business man will enjoy, subjectively and by absorption, as it were, it is more desirable that his home, where he has leisure for contemplation and which is, after all, the true expression of himself, should be made as splendid or as beautiful as possible.

"To a really sane man the time spent in the city in business is merely a means to an end, the end being the home life where we should strive to develop and express an ever increasing loftiness of character and manhood. Around the home we have time to meditate and reflect; above all we have time to be impressed and silently molded and unconsciously lifted by the force of beauty with which we may be surrounded.

"The world is more and more giving its adhesion to the new ideal of making this earth a paradise. The old idea that this earth is but a vale of tears, having its roots in the injustice and cruelty and terrible corruption of the Roman Empire, is dead, and in its place an entirely new point of view is rapidly being taken by the intellectual and sane men of the world. To embellish and beautify our public structures and especially our homes, is directly in harmony with this newer, twentieth century, spiritual view. That sculpture is the most powerful as well as the most flexible element of decoration, both of the landscape as well as of buildings, can be proven by so many examples taken from the grand palaces as well as from the small private villas scattered all over Europe, from Edinburgh to Rome, that it ought not to require further discussion.

"There will never be a great school of imaginative sculpture in this country until one of three things is done: either the state must encourage the production of ideal sculpture in contradistinction from merely monumental sculpture, by purchasing it for the interiors of public buildings and museums, as is done in Europe, or there must be an organized movement of public-spirited citizens to do what the state has not done; or the rich men must encourage its production by using it as an embellishment of their houses and

gardens. One of the reasons why marble sculpture is not used in this country is that it will not stand the wear and tear of our seasons. This can be obviated by a very simple device.

"Let us suppose a villa to which is attached a garden two hundred feet square or more in which statuary is placed. At the approach of winter it could be covered over very artistically, like a hothouse, by sections of glass frames resting on pillars. Steam heat could easily be introduced into this covered space and an equable temperature maintained, thus transforming it into a winter garden. At the approach of spring these glass frames could be taken down and stored until winter's approach behind a foliage screen in some corner or in a special storehouse. In this way the statues would never be subjected to the extremes of heat and cold which are the main causes of disintegration of marble, and which is the principal reason given for the non-employment of marble sculpture in our American gardens. Marble statues in other parts about the house could be easily moved into the covered garden during the inclement season. Surely it is not too much to suggest that the same care be taken of works of art as is given to plants employed for decorative purposes."

BARR FERREE.



PRESIDENT ELIOT ON PARK LIFE.

ONE of the most notable papers read at the recent meeting of the American Park and Outdoor Art Association in Boston was that on American Park Life by President Charles W. Eliot of Harvard University. Some extracts follow:

REQUISITES OF PARK LIFE.

ONE indispensable condition for the adequate use of public reservations is security against violence, and fear of violence, and even against annoyances, or the sight of rude and disorderly conduct. All public reservations, whether large or small, need to be well policed, so that women and children can feel perfectly safe in them. This is, of course, an expensive matter; but neither city playgrounds nor country parks will be adequately used by the persons who need them unless they are intelligently and adequately policed. A public beach, grove or forest will soon get a bad reputation if it is not vigilantly watched. Every city square or garden should be brightly lighted; first, because light is the best policeman, as Emerson said, just as publicity is the best safeguard against financial and industrial wrongs; and, secondly, because every such open space should be treated as a public parlor or popular reception-room.

Again it is useless to provide a public forest or a large country park, five or ten miles from the center of the city, unless this distance can be traversed in an agreeable manner at a low fare. Hence the value of parkways, which are merely well-built, decorated highways, reserved for pleasure travel. In all such parkways through which large reservations are approached, there should invariably be a separate space for electric cars, and this space should be neither paved nor asphalted, but turfed, as a protection against dust and reverberated noise, and as a means of health for the adjacent rows of trees and shrubs. The problem of comfortable transportation for a great multitude to and from favorite parks or beaches within the few hours most agreeable for resort to such places is still to be solved. If men, women and children are to resort by the thousand to such reservations they must be able to count on getting away comfortably, as well as on going comfortably to the park or beach. The coming away from such a resort is generally more simultaneous than the going to it.

PARKS AND SCHOOL CHILDREN.

A VERY important use of parks and public gardens should be the use by school children, under the direction of their teachers. The transfer of the great majority of the populations in many of our States from the country to the city has imposed a new duty on city schools. Children brought up in the country get a deal of invaluable training from their rural surroundings and from the farm work in which they can take a share. They drive the cows to pasture and bring them home; they roam through the woods and fields, and know the ponds and watercourses, and the creatures that live in them; they notice the weather and the state of the sky, and the round of the seasons, and the habits of domestic animals; they can ride and drive the horses, and milk the cows, and help the mother in the dairy and the father in the barn; they

learn the use of many tools, and, in general, can do something with their hands. They get training in observation, attention and quick decision, and in the judgment which prevents waste of strength, and distinguishes between the essential and immediately necessary in productive labor, and the unessential and postponable. To the city child the lack of this natural training in country life is an almost irreparable loss.

BERRY AND FLOWER PICKING.

THE enjoyment of the populace in large country parks and forests can be greatly promoted by allowing the picking of flowers and berries; and this permission may be safely given, provided plants are not dug up by the roots, either by design or through carelessness. So valuable is this privilege that it is better to run some risk of the extermination of desirable growths, than to prohibit picking. It is, of course, possible to keep sowing the plants which are most apt to be picked, like the columbine, the wild geranium, the anemone, the violet and the strawberry blossom. Some fragrant things ought to be carefully raised in the parks expressly for the enjoyment they give to the people who discover them appearing in their season.

MANY SEATS DESIRABLE.

IN scenery parks the enjoyment of the people can be greatly promoted by providing numerous footpaths, leading to the best points of view and to seats there provided. These paths should of course be nothing more than trails, from which the underbrush and other obstacles to passage have been removed. Seats at good points of view are very important parts of this provision. The people need to be tempted to linger in the parks for hours, and to do this without covering great distances or enduring anything which can properly be called fatigue. It is the open air and the quiet aspect of nature which are wholesome and refreshing, and to get the benefit of these influences takes time and a sense of leisure and restfulness. In like manner in small city squares the provision of seats is indispensable to popular enjoyment of these open spaces. Small squares in the midst of dense population should be open-air parlors, resorts for the feeble and infirm rather than for the strong and tireless. In all tree-planted avenues or boulevards, chairs should be provided either by the municipality or by persons who have paid the municipality for the privilege of letting chairs.

A MODEL ENGLISH SUBURB.

EACH house in the initial village, Bournville, five miles from Birmingham, has a good-sized garden, the average allowed to each being six hundred square yards, and a small orchard. These gardens are laid out in advance for the tenant, so that when a new cottage is taken the tenant does not get discouraged by having to break up hard, uncultivated land. There are about two hundred garden allotments besides. Two professional gardeners with a staff of men are ready to give aid and advice. Gardening classes are conducted. One-tenth of the land, in addition, has been reserved for the public parks and recreation grounds, and a bath house has been built.

Cooperation is exercised among the tenantry in the purchase of seeds, tools, and gardening books. The most interesting feature of the scheme is that it is a self-perpetuating and expanding benefit. Mr. George Cadbury having built the village at a cost of over half a million dollars, has put it into the hands of the board of village trustees as a permanent gift to humanity, and has directed that the income, which already amounts to \$25,000 annually, shall be used in establishing similar model towns elsewhere in England. That every house is constantly occupied and there are enough applications in hand to people a village half as large again augurs well for the future of the enterprise.

The establishment of this promising philanthropic project, says the Boston Transcript, is unusually significant, because the founder's gift represents a large part of his fortune. In referring to this fact, it seems, he recently said: "My gift is the bulk of my property, outside of my business. I have seriously considered how far a man is justified in giving away the heritage of his children, and have come to the conclusion that my children will be all the better off for being deprived of this money. Great wealth is not to be desired, and in my experience of life it is generally more of a curse than a blessing to the families of those who possess it."

Dust may be removed from a painted floor with a wet flannel bag, wrung out as dry as possible, put on a broom, and dragged in even strokes over the floor. All the dirt will in this way be collected in one place, and can be easily taken up without leaving streaks of dust on the paint.

Hot water may be used to tighten the seats of cane chairs. Wash the lower surface with very hot water with a brush and dry in the open air away from the direct rays of the sun.

Fire Protection

FIRES AND DWELLINGS.

THE fire calamities of the last few months have stimulated the activities of the manufacturers of fire escapes and life saving devices. This is a subject of prime importance and which can not be too often insisted upon. A certain amount of public inspection is given to factories, mercantile establishments, hospitals, public buildings, and even to tenement houses, but the average private dwelling is generally unsupplied with any sort of protective apparatus, and few occupants have any idea what course they would pursue were they suddenly to be awakened in the night to find their dwelling afire, or even what steps they should take in the day time were their property to burn. The question is entirely too serious to be neglected or avoided, and every householder, whether in the city or the country should make some provision to avoid the catastrophe that must ensue once fire gains a foothold within the house. The placing of insurance is no remedy, as many people have found to their cost.

FIRES IN SMALL CITIES.

IN discussing the fires in the smaller cities near New York, Mr. Perez M. Stewart, Superintendent of Buildings for the Borough of Manhattan, pointed out that one of the first things that comes to mind is that every municipality should have prescribed fire limits, inside of which no buildings should be erected that are not constructed of fireproof materials as nearly as practicable. In small localities, where land is cheaper than in large cities, and where low rents obtain in consequence, the requirement of fireproof construction may seem oppressive to both builders and owners from a financial point of view. Yet as a matter of safety and economy, that rule should prevail, and it is particularly desirable in places of importance. Just as soon as improvements in fireproof materials have reached a stage where it is as cheap to put up buildings that are fireproof, or approximately so, as it is to erect frame buildings, the danger of fires like that of Paterson will be reduced to a minimum. The adoption of fire lines and brick buildings, then, is the least that can be done to prevent great conflagrations. The difficulty of checking the spread of fires Mr. Stewart regards as almost hopeless. In almost every instance of a big fire, excepting that of the Chicago fire, he remarked, it has been stopped only when it reached the residence district, where the houses are at least a half a lot, and in some instances several lots, apart, just as they are in Paterson, Seattle, and other towns where big fires have occurred. Hence it is hardly necessary to deal with the construction of fireproof houses in small localities; for when fire breaks out in the residence portion of such places it is generally controlled before it has had an opportunity to spread over any great area. It would be out of the question to argue for fireproof construction in the residence district of small towns, but the fire limit and fireproof construction of the business portion of a town should be absolute; and if a builder or owner would only stop to consider the difference in insurance rates on a fireproof or semirefireproof building and a frame building, he would have no trouble in figuring that the saving would soon meet the difference in the first cost.

MOTOR-BICYCLE HAZARDS.

A QUESTION has been raised respecting the right of policy-holders to store motor-bicycles in insured structures. The point, adds a contemporary, is new to underwriters of this country, and may lead to complications over the adjustment of explosion losses which are liable to occur at summer hotels and road houses, where these machines are kept. Hundreds of such wheels are now in use, and although the accident ratio has been heavy, the service has not been broad enough to disclose the exact fire hazards involved. There can be no question that the standard fire insurance policy in use in this State does not cover the risks of these machines where receptacles containing gasoline are improperly exposed. Owners of buildings in which motor-bicycles are sheltered should, to insure proper insurance protection, apply to the underwriters for permits covering the storage of such vehicles. This is peculiarly necessary where the machines are stored in dwelling houses or structures adjacent thereto. Motor-bicycles are not necessarily unsafe, nor should they be discriminated against by fire underwriters. But the insurance companies are entitled to notice when policies now in force are affected by hazards that did not exist at the time that the insurance was taken out.

A RESIDENCE AT TUXEDO, N. Y.

THE residence which is presented on cover and pages 46 and 47 was erected for Price Collier, Esq., at Tuxedo, N. Y. The building is built of red brick, laid in Flemish bond with white mortar. The quoins are laid with white brick. The woodwork at windows, porches, and cornice is painted white. The roof, of fine proportions, is covered with shingles, and is left to weather finish. The chimneys are built of similar brick with white tops. Dimensions: Front, 96 ft.; side 56 ft., not including porches. Height of ceilings: Cellar, 8 ft.; first story, 11 ft.; second, 10 ft.; third 9 ft. The interior is designed throughout in the Colonial style. The entrance hall is separated from the hall proper by double sliding doors, thus forming a living-room. This entrance hall is trimmed with massive casings at the doors and window openings, and is treated with ivory white. The trim throughout the house is treated similar. This entrance hall is provided with a low paneled wainscoting, and a broad, sweeping staircase of handsome design and finely executed with carved brackets to each riser and a cluster newel post. The hall is provided with two bay windows with paneled seats, and an open fireplace built of red brick, with the facings and a hearth of the same, and a mantel of Colonial style and handsomely carved. The drawing-room is treated in an elegant manner, with a pilaster effect at the door and window openings. It has a fireplace with marble facings and a hearth of the same, and a mantel of fine proportions and detail. The study is ivory white, and is provided with an open fireplace built of red brick, and provided with a hearth and facings of the same and a mantel. The dining-room is treated in a similar manner, and has a paneled wainscoting and a massive cornice. The fireplace has a massive mantel rising to the ceiling, with ornamental pilasters and Ionic caps. The overmantel is provided with a mirror surmounted with a carved entablature. The butler's pantry is fitted with drawers, dressers, cupboards and sink complete. The kitchen, servants' hall, and store room are provided with all the best modern conveniences. The rear hall forms an access to the cellar and to the second and third floors. The second floor contains the family rooms, provided with well fitted closets, open fireplaces, and bathrooms, besides a well fitted linen closet. There is also provided over the kitchen extension four servants' bedrooms, bathroom, and linen closet. The third floor contains a well fitted up billiard-room and extra guests' rooms and trunk rooms. The cellar contains the laundry, heating apparatus, storage-room, etc. Mr. Bruce Price, architect, St. James Building, 1133 Broadway, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A CALIFORNIA SUMMER COTTAGE.

THE residence of Arthur E. Wellington, San Anselmo, Cal., illustrated on page 54, is a type of a style that is popular in the suburbs of San Francisco occupied by merchants who seek, during the summer months, a more genial atmosphere than is afforded by the bay metropolis. San Anselmo is an annex of the nearby beautiful city of San Rafael, and is located on the slopes of Mount Tamalpais, which shelters from the chill ocean winds and accompanying fogs. But fifteen miles distant from the bay of San Francisco, the temperature is many degrees higher than in the city. Vegetation is semi-tropical, and all houses are embowered in ivy vines and rose trees, which grow with wonderful rapidity and luxuriant beauty. The residence cost about \$3,000, and is two stories in height, containing seven living rooms. Though of small dimensions, no conveniences of water, electric lighting, etc., are lacking. The first floor is finished in curly maple, the second in a variety of native woods. The architect is Maxwell G. Bugbee, of San Francisco, Cal.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

THE Woodbridge, England, district council has resorted to novel means to prevent accidents at dangerous street corners. Three roads in the district meet at awkward angles, and collisions between vehicles have been rather common. Widening by demolition of house property being impossible, the surveyor recommended the erection of mirrors. By this means drivers can see through brick walls, so to speak, and the experiment has proved successful.

THE best way to treat plaster casts, says an exchange, is to arrange a special background of velvet or felting, in rich blue, deep red, autumn brown, or dark green. One of those tints certainly will harmonize with the prevailing tone of the room, and will add immeasurably to the effectiveness of the casts. It needs to be large enough to leave a four or five inch margin.

The Country House

THE FURNISHINGS

THE country house is an unmixed joy to the furnisher. Nowhere else can so much be made to go so far. The fact that little is expected, that the summer home is but a temporary one, doubtless has much to do with the reckless joyousness with which it is regarded. The manufacturers have been quick to perceive that a special market exists for wares of all sorts intended for the country home and for no other, and it is astonishing to see how many beautiful things can be obtained for such small amounts. The mere fact that little is expected in furnishings is a relief. The stuffy chairs, the heavy furniture, the multitude of bric-à-brac with which one's permanent habitation may be adorned have no place in the country home. All is bright, cheerful, light, inexpensive and neat. So many good things are now made at small prices that no excuse exists for a country house which is not without its special note of individuality and charm. The success of the country house—the summer house—depends very largely on its furnishings. If they are good in themselves and cleverly arranged, a charming interior is as certain as anything.

A PLEASANT ENTRANCE HALL.

A DESCRIPTION of a country house near New York affords some pleasant glimpses of the entrance hall. It is square and roomy, with a row of quaint windows at one side. These are four in number, and are built about four feet above the floor. Each has six small panes of glass, and is separated from its neighbor only by a double molding. The wall at each end and above is paneled, and below the windows is a wide seat that extends their entire length. Beneath it is a series of small closets with paneled doors. The seat has a cushion of warm wood brown corduroy that harmonizes pleasantly with the oak used throughout. A rod of brass is fastened above the windows to hold short curtains of yellow silk that can be pushed aside as desired. A balcony is built on three sides of the hall. This arrangement gives the hall the height of the two stories, which adds much to its dignity and beauty. The stairs leading to the balcony are broad and gently sloped, and broken nearly midway by a turn and a landing. Support is given to the balcony by great square oak beams. Opposite the stairs is the fireplace, a simple structure faced with rough cobblestones, with a massive beam introduced as mantel shelf. The stone facing is continued to the balcony, and at each side a small closet is "let in," in a manner suggestive of what was known as the "rum closets" in old New England farmhouses of the Colonial period.

A LONG ISLAND VERANDA.

THERE is a shore cottage far out on Long Island, says the New York Tribune, of which the sole original attractions were natural ones—its water view and its "ocean breezes"—a really primitive building, retained for years as a sort of overflow station for a growing family whose modest means have only lately reached the million mark. Within the last few years the demands made upon the cottage's capacity by a fast widening circle of friends required additional apartments to the extent of some half a hundred rooms. Instead, however, of razing the original cottage of long and varied associations and erecting a spacious and imposing structure bearing testimony to the family's increase in fortune, the owner decided to build about the parent roof a group of unpretentious (though perfectly appointed), rough shingled, many gabled cottages, sufficiently unsymmetrical in design and placement to give relief to the eye, and yet all practically surrounded with and connected by porches and verandas, these really being the pivotal feature of the whole design. The result is simply charming. No trees have been felled, and the overarching branches of these about the roofs and gables break the monotony of the stretch of shingles and fill the wide, many angled verandas with delightful sweeps of shade and masses of shadow. The opportunity afforded for artistic furnishing is ample and varied. One "L" shaped angle, with a northern exposure, has been fitted up in russet and terra cotta, warm tinted moodj mats and "old hickory" rockers, tête-à-têtes and tables. Red shaded, pagoda shaped "storm lamps" swing in the breeze, and the rolling bamboo screens are all in soft browns and dull reds. The matings that cover the walls (split bamboo, tacked where the edges join) and the fantastic grouping of fans, here and there a deep red one, with a crimson cushion or two among the dozen strewn about, make a color scheme delightful to "live with."

The Household

A SUMMER BEDCHAMBER.

A summer bedchamber is described with the bedstead, dresser, tables, chairs, sofa, chiffonier and some odd pieces all in pure white enamel, with gilt mountings. Fancy matting in white and green (that soft shade of young foliage) cover the floor and the cushions on the chairs. Those on the lounge are in white and soft green tones of artistic and dainty design. English bobbinette curtains with deep ruffles edged with Renaissance insertion and lace drape the windows. The walls of the room are hung with pearl or silvery white paper, with a frieze done in ferns and water lilies, or sprays of apple blossoms.

THE "DEN."

THE household den is usually an apartment consecrated to the man of the house. Presumably it is the place wherein he thinks his mightiest thoughts and carries on any special occupation that is peculiarly congenial to him. Whether such a room is really needed or not is a question that must be decided by each individual. Meanwhile, it might have been apparent to the most careless observer that, if the man of the house must have his special "den," the lady would not be long in demanding a similar spot for retirement. The question was learnedly discussed by a daily paper some time since, and now that the suggestion is made we may expect to find the woman's den a feature of the newest house plans. Denlets for the children will doubtless follow, until family life will survive only in the tenement, where a family of a dozen or more are brought up in a single room.

A CUSHIONED FENDER.

ONE of the newest ideas in household furnishings is a padded or cushioned fender. They are made from eight to twelve feet long and twenty inches high, with sides from two and a half to three feet deep. The rail seats are eight to twelve inches wide, and are upholstered in leather, Geneva plush, or wall velvets. They are fairly expensive when made of wood, and much more costly when made of brass.

PORCH FURNITURE.

A GREAT variety of charming porch furniture has come into use this year. Most of it is now made waterproof, so that it is no longer necessary to turn chairs up at night, move the table into the furthest corner, and bring in the rugs and cushions. The appearance of these articles has been a veritable boon to the exhausted householder, who has found the labor of bringing in everything from the porch at night an unpleasant ending to an enjoyable evening. Screen chairs are among the latest ideas. They are made wide with broad arms, and a seat wide enough for two, with a great back, high and broad enough to absolutely hide any occupant of the chair. The practical utility of these chairs is so very evident that they will doubtless enjoy a long maintained popularity. Porch swings can be made out of bamboo couches, with an additional railing at the back and foot, making both ends alike. These can be purchased ready for swinging or can be made by any ingenious person. The waterproof rugs and cushions are, perhaps, the most useful of recent devices for the porch and are a distinct saving in labor.

THE FURNACE.

THE furnace should not be forgotten in the pleasant days of summer. Early fall is likely to come upon us suddenly, and there will be no time to attend to furnace repairs once the artificial heat is needed. The high price of coal, occasioned by the strike of the miners, is likely to seriously affect the householder once the cold weather sets in, and it is but a matter of ordinary caution to see that the furnace is in proper condition, that it has been thoroughly cleaned, the smoke pipe emptied of soot, the flues and other parts well looked into. The furnace is apt to be neglected until it is actually wanted. Much discomfort and not a little expense can be saved by timely forethought.

THE COTTAGE DINING-ROOM.

A COTTAGE for temporary use should have only the smallest number of rooms possible. The parlor is, of course, quite unknown in such dwellings, and the dining-room is almost as useless an apartment. A general living-room, which may be unusually spacious if only a small number of rooms is needed, is about all that is required in a cottage for temporary use. The dining table may be placed at one end, and the room used for almost all general purposes without overcrowding or inconvenience. Those who have lived in such cottages invariably find them most convenient.

A RESIDENCE AT ATLANTA, GA.

IN the house for Hugh Richardson, Esq., at Atlanta, Ga., the architect, Mr. W. T. Downing, designed a residence after the English country house style, unrestricted by any limitations as to space and proportions. It occupies a well shaded, well elevated corner lot on the outskirts of the city, and is one of the most successful pieces of domestic architecture in the South. The house itself has a frontage of almost one hundred feet, including the cement terrace with which it is partially surrounded. This in turn leads down to a grassy terrace which breaks the descent of the lot to the level of the street. The front garden, or lawn, is divided from that to the rear by a low wall of open brick work, which, in common with the brick pedestal structures placed at regular intervals about the grass terrace, greatly enhances the architectural effect. Several illustrations are shown on pages 52 and 53.

The house is of brick laid up in white mortar, effectively combined with beam and plaster work and leaded glass windows. The plaster work is painted a deep cream; the beams and trim, with the exception of the window frames and casings, are of a rich reddish brown. The effect of the house with its gables, its picturesque half timber work, and its terraces, all appropriately set in the midst of trees, is very charming. The interior is more interesting than the exterior. Entering the vestibule, you find yourself in a long, wide hallway, connecting two main segments of the building. The wood work of this hall is Flemish oak, in handsome design, with Ionic pilasters. The walls are finished in vivid crimson, above which rises a cream frieze and ceiling. The hall is 14 x 26 feet, and leads from the dining-room on the north to the drawing-room and library on the south. The drawing-room and library are both commodious. The drawing-room, library, and den, which are en suite, are similarly finished in mahogany. Massive paneled doors are features of these rooms. The mantels, also of mahogany, are from original designs by Mr. Downing, and executed under his supervision. The drawing-room walls are finished in a soft shade of reseda green; the library is done in two shades of old blue and the den likewise. The dining-room is 16 x 22 feet and occupies the front half of the north segment of the building. It is finished in white enamel and silver, the carpet being a soft old rose, and the walls and hangings the same color. The walls have a paneled wainscot to the height of five and a half feet, intersected at regular intervals by Ionic pilasters reaching as high as the picture molding. The mantel is white woodwork and white tiling; the sideboard stretches across the front end of the room. The dining-room opens out on a covered veranda to the north through French windows. The upstairs hall, in common with the sleeping chambers, is finished in white enamel. A bedroom has two dressing-rooms with a bath between—a convenient arrangement when a room is occupied by two persons. All the bath fixtures in the house are of white porcelain, and the plumbing nickel-plated throughout. The hardware in the dining-room is in silver finish; that in the body of the house is of bronze.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A GARDENER'S COTTAGE FOR MRS. ELLIOTT F. SHEPARD, AT SCARBOROUGH, N. Y.

THE gardener's cottage which we illustrate on page 51 has been erected for Mrs. Elliott F. Shepard at Scarborough, N. Y. The house is built in the Italian villa style. It is constructed of rough faced brick laid in white mortar, and the whole surmounted by a red tiled roof. The plan shows a kitchen with its usual dependencies well furnished, a dining-room, and a living-room fitted complete. The second story contains three bedrooms and a bathroom. The cellar contains a furnace and ample storage room. Mr. Abner J. Haydel, architect, 156 Fifth Avenue, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

COOL HOUSES.

OPEN windows do not necessarily mean cool houses. Every house should be well and thoroughly aired every morning; but just as in cold weather the aim of every housekeeper is to have a warm house, so in warm weather the cool house is the great desideratum. Open windows, with such air as may be moving blowing through the house, are commonly supposed to be the proper thing in hot weather. This is not the course followed in hot countries, nor is it the procedure suggested by experience. A cool breeze will cool a house, but a warm one will heat it. Hot air should be excluded. After the house has been well aired in the morning the windows and blinds on the sunny side should be tightly closed to keep out the hot air; when the sun has shifted it will be time to open them again. One must regulate the kind of air one admits into the house in warm weather, if the most comfortable results are to be had.

Housing Problems

THE PROBLEM IN EUROPE AND AMERICA.

THE housing problem, meaning by that phrase the housing of poor people, is one that will not down. It does not become easier, but is constantly growing more and more complex. It is a vital problem, because it not only affects the people immediately concerned, that is to say, those whose dwellings constitute the problem itself, but because it interests and influences all the members of the body politic. The problem of housing the poor in New York is the most acute we have in America, because that city can not grow larger in area, and can only increase by upward expansion. But New York is not alone in such matters. Other American cities have had to meet and discuss it, and it becomes more pressing and more vital every day. In a measure its difficulties are more real in England than with us, but it is a problem that will exist wherever poor people are crowded together, and wherever rents are high or out of proportion to the value received. People who live in individual houses, and who surround themselves with the luxuries of modern living should not close their eyes to this important architectural problem. It is much more serious to every one than is generally realized.

ONE-ROOMED HOUSES.

It is certainly high time, says the London Globe, to take the housing question seriously when an English town of comparatively small population crowds a heavy percentage of its inhabitants into one-roomed dwellings. This is the present case at Durham. The place now contains four hundred and thirty-nine human residences affording that limited amount of accommodation. What the number of occupiers may be can only be guessed from the fact that in one instance the single apartment furnishes quarters for eleven persons. That, however, is exceptional; the general average for each hut is estimated as between seven and eight inmates.

Bearing in mind how polluted the atmosphere must be at night, it is no matter for wonder that the infant mortality in these dens is exceptionally high; the newly born are said to die off like flies. The adults must also suffer more or less in health from taking such vitiated air into their lungs, while the injury to morality through so many people of both sexes pigging together had better be left to the imagination.

The terrible overcrowding is said to be produced by the lack of miners' houses at many of the adjacent collieries; there being none available, the pitmen are compelled to live at Durham, and the camaraderie which exists among them insures a welcome for every additional lodger. If that be the case, the question arises as to whether every colliery should not be equipped with housing accommodation proportionate to the number of miners employed; but when a strike occurs the pit owners are often hard put to it to turn out the strikers to make room for more willing workers.

HOUSING IN LIVERPOOL.

A REPORT presented by the United States Consul at Liverpool contains some interesting information concerning the work being carried out by the housing committee of the Liverpool Corporation. The north of the city contains a district of about three hundred and eighty-three acres, in which houses structurally insanitary are found in large numbers. Many of these have, however, been already demolished, and others are in process of demolition. At the south end is a similar area of about 100 acres, to which the same remarks apply. These two areas contain the great bulk of structurally insanitary houses. There are other districts in the city where houses not structurally insanitary have been made insanitary by reason of overcrowding and the habits of the people.

In some cases land left when the insanitary property is demolished is sold by the Corporation to private individuals, subject to certain restrictions as to the kind of building to be erected, the object of which is to secure improved sanitary conditions. At least seven hundred houses have been erected on land so sold. In other cases the Corporation themselves have built and are building blocks of dwellings on vacant sites; 895 tenements have been erected and 1,301 tenements are in course of building or contemplated. Where, under the powers of the local act, the owner retains the site, no buildings can subsequently be erected except with the approval of the Corporation.

"THE ANCHORAGE," THE SUMMER HOME OF J. PERCY BARTRAM, ESQ., AT BLACK ROCK, CONN.

"IN this Safe Anchorage find Welcome and Good Cheer" is the inscription that greets the eye upon entering the summer home of Joseph Percy Bartram, Esq., at Black Rock, Conn. "The Anchorage," which is presented on pages 48 and 49, illustrates what can be successfully accomplished by a close study of the demands made of a house designed for summer uses. It is a difficult matter to obtain a plan that is practically complete along these lines, and at the same time secure the combination of elevations that are equally complete in their artistic sense, as is shown by a study of the engravings illustrated. The building is designed and executed in the gambrel roof style, with pure Colonial detail. The spacious piazza, porte-cochère, and cobblestone chimneys are happy features of the exterior. The outside framework, from the grade line to the peak, is covered with matched sheathing, and then with white cedar shingles. This shingle work is left to weather finish a natural silvery gray color, while the trimmings are painted old ivory white. The house is planned with the front facing Black Rock harbor, and the rear facing the avenue, from which an entrance is obtained through a "Dutch" door from the porte-cochère. Upon entering into a small lobby a vista is immediately obtained of the entire suite, consisting of a large living-room and a dining-room. These two rooms are treated in a most artistic manner, and are provided with a six-inch beveled and battened wainscoting to the height of six feet, finished with an ornamental plate rack or cap. The space between this plate rack and the ceiling is covered with a deep crimson burlap, fastened at the top with a picture molding. The ceiling joists are of extra thickness and are dressed and exposed. These joists form panels which are ceiled up with narrow beaded North Carolina pine, and finished with a molding on the inside. The entire woodwork in these two rooms is stained a dark Flemish brown color, and is treated with a rubbed finish. This color scheme finds a most harmonious effect with the crimson wall covering, the rugs of green and red coloring, and the "Mission" furniture with its apple green and turkey red upholstery. The effect of the rooms is exceedingly attractive, and the whole tone is strengthened by the large columnated feature at the staircase, which rises out of the living-room, and also between the living-room and the dining-room, forming a separation for these apartments, which are further separated by an adjustable screen, which is easily removed, throwing the two rooms into one when desired. The living-room is provided with a bay window, a paneled seat, and an ornamental staircase, which rises from a broad landing, from which an oriel bay window is thrown out, and provided with latticed casement windows and seat. The fireplace is built of selected cobblestones, taken from the shore, which are beautiful in their coloring of old browns, grays, and blues. This cobblestone work is laid up at random with facings of the same, and the whole capped with a mantel supported on corbel brackets, between which an appropriate inscription is cut in the face. The coat closet is lighted by a window and forms a quiet place for the telephone. The dining-room has a bay window with seat. The butler's pantry is well fitted with drawers, dresser, cupboards, and a butler's bowl, and it forms the link between the main house and the extension placed at an angle from the main building. This extension, which contains the kitchen and its dependencies, with the servants' quarters above, is practically a detached building, and forms the principal characteristic of the entire house, and a very happy solution of the problem relative to the isolation of the kitchen and servants' quarters from the family part of a house. This extension is plastered and is trimmed with North Carolina pine, treated with a hard oil finish. The kitchen is fitted with all the best modern conveniences, including a Thatcher range, pot pantry, sink, and a lobby containing a store closet and ample space for icebox. The second floor of the main house is brown coated and tinted, and is trimmed with cypress, treated throughout with old ivory white paint. The walls in the hall and den are treated with old rose, the owner's room in apple green, the guests' room in Colonial yellow, and the remaining bedroom in blue. A unique feature of this floor is the owner's room provided with separate closets and private bathroom. All the rooms have well fitted closets. The bathrooms are wainscoted with narrow beaded stuff to the height of four feet; this wainscoting and the walls and ceiling above are treated with china white enamel. The bathrooms are furnished with porcelain fixtures and exposed nickel-plated plumbing. The third floor contains two bedrooms and a trunk room. There is a cellar under part of the house, containing a laundry, men's and women's bath boxes and fresh water spray, and also a furnace, with the necessary coal and wood bins. Mr. Francis Durando Nichols, architect, 2425 Fairfield Avenue, Bridgeport, Conn.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.



LEASED PREMISES—LIENS ON BUILDINGS.

IT is no objection to the establishment and enforcement of a mechanic's lien upon buildings and improvements on leased premises under a contract with the lessee, and upon the unexpired terms of the lease, that there was a provision in the lease which prohibited the removal of the improvements from the premises unless the rent be paid. *Alabama State Fair and Agricultural Association vs. Alabama Gas Fixture and Plumbing Co.*, 31 So. Rep. (Ala.) 26.

MATERIAL MAN'S LIEN.

A MATERIAL man who furnishes material to the contractors can have no lien on such building if such material is not incorporated therein by reason of the default of the contractors. *McConnell et al. vs. Hewes et al.*, 40 S. E. Rep. (W. Va.) 436.

REFEREE'S DECISION—EXTRA WORK.

WHERE the parties to a contract agree to leave a third party to determine what, if any, compensation is to be allowed and paid for extra work, the determination of such arbitrator thereon is conclusive. *Jones & Hotchkiss Co. vs. Davenport*, 50 At. Rep. (Conn.) 1028.

ABANDONMENT OF WORK.

WHERE a contract for the erection of a building requires payments in installments as the work progresses, on the contractor's abandonment of the work on account of the owner's failure to pay an installment it is incumbent on him to show, in order to enforce his lien, a full performance of his obligations, without any substantial omission, as mere conditions precedent to the payment of the installment. *McGrath vs. Horgan et al.*, 76 N. Y. Supp. 412.

COMPLETION BY OWNER.

WHERE a contract for a building authorizes the owner, on the contractor's neglect or refusal to furnish material or workmen, to declare the work abandoned, and complete it at the contractor's cost, and the owner, in accordance therewith, completes the contract, the contractor may, in equity, recover and enforce his lien for the difference between the cost of completion and the balance unpaid on the contract. *McGrath vs. Horgan et al.*, 76 N. Y. Supp. 412.

DEFAULT BY CONTRACTOR.

AN owner of a building is liable for the claims of material men, even though there has been a breach of contract by the principal contractor, if there remains a sufficient part of the contract price undisposed of to pay the same, after deducting therefrom the cost of completion of the contract. *Person vs. Stoll et al.*, 76 N. Y. Supp. 324.

ESTOPPEL TO COMPLAIN OF DELAY.

THOUGH a building contract provided for the payment of rent by way of damages if the contractor should fail to complete the building in ninety working days, the owner can not complain of the failure to complete the building within that time, as he failed to make payments as the contract provided. *Harris' Assignee vs. Gardner et al.*, 68 S. W. Rep. (Ky.) 8.

NOTICE OF LIEN BY ASSIGNEE.

A NOTICE of a mechanic's lien filed by an assignee of a contractor was not binding, as only the original contractor could file such notices. *Zachary et al. vs. Perry et ux.*, 41 S. E. Rep. (N. C.) 533.

RIGHT TO REJECT WORK.

A CONDITION, in a contract requiring the erection of a wall according to plans and specifications, that the employer shall determine all questions as to performance, does not entitle the employer to reject the work, and preclude an inquiry into the reason of such refusal, but the issue of substantial performance may be raised in an action by the contractor for the agreed price. *Schliess vs. City of Grand Rapids*, 90 N. W. Rep. (Mich.) 700.

AGREEMENT AS TO ARBITRATION.

A CONTRACT for the erection of county buildings which provides that disputes as to its construction, or what is extra work, shall be conclusively determined by the county commissioners and the architect, is not binding on the contractor, as a party making a contract can not stipulate that he himself shall arbitrate differences arising therefrom. *Board of Commissioners of Fulton County vs. Gibson*, 63 N. E. Rep. (Ind.) 982.

AN INEXPENSIVE RESIDENCE AT WAYNE, PA.

THE residence shown on page 50, in the well known and thoroughly modern suburb of Philadelphia, is 45 ft. front by about 39 ft. deep, exclusive of the porch. Because of the sloping nature of the ground, the laundry is placed in the basement directly underneath the kitchen. This gives a large, dry, well lighted room, with a door opening on to the grade at the rear. It also leaves exposed much of the stone wall of the cellar, which consequently is faced and pointed; this with the chimney, effectively disposed on the front of the house, produces somewhat the appearance of a stone first story.

Above the stone base the outer walls are covered with clapboards, shingles and half timber work. The clapboards are painted a green gray, while the shingles are left to become weather stained. The timber work is a dark, rich brown stain, almost black, and the plaster between is white rough cast. The woodwork of porch is treated in the same manner as the timber work, and the window sashes throughout are painted a cream white. The roof is of shingles unstained.

The heights of ceilings are: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; and third, 8 ft. The plan is compact and unusually well arranged for a house of this size and cost. The rooms of the first story "open up" in an admirable manner, and give pleasing vistas from one to the other. The hall, extending through the house with a triple window on the stair landing, which can be seen as one enters the front door, is a feature. The stairs, starting from the side, under a wooden arch supported by wooden pilasters, with a seat facing the door, make a most effective treatment of the hall. This hall is treated in white enamel, while the reception room is of the same treatment. The living-room and dining-room are trimmed with hard woods.

The kitchen extends beyond the back line of the house, giving it light and air on three sides, thus insuring against heat and odors entering the body of the house. The pantry, under the stair landing, has a sink and a dresser, with extra large drawers for table linen, etc., and a space is provided for a refrigerator.

The second floor contains four bedrooms and a sewing-room. One bedroom and the sewing-room have open fireplaces, and each room is provided with two large closets. The three principal bedrooms are so arranged that the closing of one door shuts them off from the hall and yet leaves them all communicating. A good sized linen-room, with ample cupboards and shelves and two hall closets go to make up a complete second floor.

The third floor contains three bedrooms, one of them quite large, a bathroom, and a trunk loft or store-room.

The finish of the second floor is pine, painted white, with mahoganized doors and glass knobs, and the balance of the house in yellow pine finished natural.

Mr. David Knickerbacker Boyd, architect, Harrison Building, Philadelphia.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A CALIFORNIA HOME.

MR. CHARLES F. LUMMIS, the editor of Out West, has been building a home for himself with the labor of his own hands. It is built of granite boulders of every shape and size. Unhewed girders of oak stretch from wall to wall and support a low, flat roof, which will serve as a promenade on warm summer nights. The walls are four feet thick, and the large windows are deeply set in them. Hewed planks of odd-grained wood form the heavy doors, of which no two are alike, and none is placed with an eye to symmetry. Each door is hung on a pair of fantastic, forged hinges. The windows, too, are of all sizes and shapes and seemingly placed at random. A circular, jagged tower, forming a buttress at one of the angles, rises high enough to furnish an unobstructed view of a wide, picturesque landscape. The workroom is on the upper floor. This can be reached only by an outside stairway. The upper part of the house is all one room, with a little ante-room at the head of the stairway, which contains many relics of a civilization dating back to the time when the Aztecs and the Incas dominated this continent.

A SIGNIFICANT remark was made at a meeting of one of the health protective associations, which have proved such useful agencies for the dissemination of knowledge in public and domestic affairs by women, to the effect that "so many houses are decorated but not dusted." The average exercise with a dusting cloth or brush may not be scientific nor valuable from a sanitary point of view, but it is generally well meant and sometimes displaces too evident strata of dust. It is at least important that women should understand the value of domestic cleanliness. Such subjects have a proper place in the discussions of women's organizations.

New Building Patents

The following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY by MUNN & Co., Solicitors of American and Foreign Patents.

A PRINTED COPY of the specifications and drawings of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

BRICK OR BLOCK. L. A. Brown, St. Louis, Mo. July 1. 703,760
BUILDING BLOCK AND WALL. C. F. Whittlesey, Albuquerque, New Mexico. July 15. 704,606
TILE. C. Worth, Newark, N. J. July 15. 704,727
TILE. W. C. State, Akron, Ohio. July 15. 704,766
BUILDING SLAB AND MEANS FOR SUPPORTING SAME. T. P. Payne, New Rochelle, N. Y. July 22. 705,127
ARTIFICIAL STONE FACING FOR BUILDINGS. T. Kelly and F. C. Sarazin, West Superior, Wis. July 29. 705,846

CARPENTRY.

WINDOW. E. Kraft, Madera, Pa. July 1. 703,600
METHOD OF FRAMING GLASS. Talmay & Scattergood, Philadelphia, Pa. July 8. 704,400, 704,401
DOOR. F. F. Low, Boston, Mass. July 15. 704,887
WINDOW. P. Lalor, Denver, Col. July 22. 705,098
WOODEN PANEL, LINING, CEILING, AND FLOOR FOR BUILDINGS. W. T. Crosse, Middlesex, England. July 29. 705,737
WINDING STAIRCASE. H. Snider, Indianapolis, Ind. July 29. 705,794
WINDOW. J. Horsfield, Chicago, Ill. July 29. 705,999

CONSTRUCTION.

METALLIC LATHING. F. A. Mitchell, New York, N. Y. July 8. 704,072
CEILING PLATE ATTACHMENT. A. H. Muus, Southington, Conn. July 15. 704,562
MACHINE FOR LAYING BRICKS FOR BUILDING PURPOSES. J. H. Knight, Barfield, England. July 15. 704,648
METAL FRAMEWORK FOR BUILDINGS. Huber & Milmine, Toledo, Ohio. July 15. 704,829
BUILDING CONSTRUCTION. W. M. Riley, Chicago, Ill. July 15. 704,933
BUILDING WALL. A. De Man, New York, N. Y. July 22. 705,048
FIREPROOF FLOOR CONSTRUCTION. G. R. King, New Brighton, N. Y. July 22. 705,360
GLAZED ROOF OR STRUCTURE. E. Van Noorden, Boston, Mass. July 22. 705,491

ELEVATORS.

SAFETY STOP FOR ELEVATORS. A. Cowperthwait, Brooklyn, N. Y. July 1. 703,548
SAFETY DEVICE FOR ELEVATORS. W. H. Wilsey, Sioux City, Iowa. July 8. 704,468
SELF-ADJUSTING DUMB-WAITER GRIP AND FRICTION ROLLER. T. Ackerman, New York, N. Y. July 22. 705,010
ELEVATOR. E. R. Gill, New York, N. Y. July 22. 705,338
SAFETY DEVICE FOR ELEVATORS. S. D. Strohm, Philadelphia, Pa. July 22. 705,480

FIREPROOFING AND FIRE EXTINGUISHMENT.

FIRE EXTINGUISHING APPARATUS. J. S. Letts, Gladstone, N. Dak. July 1. 703,662
AUTOMATIC FIRE EXTINGUISHER. R. W. Newton, Providence, R. I. July 1. 703,663
SPRING ROLLER FOR FIREPROOF BLINDS. W. R. Kinneer, Columbus, Ohio. July 15. 704,546
AUTOMATIC FIRE EXTINGUISHER. O. Hoffmann, Withington, England. July 15. 704,682
FIREPROOF BUILDING. T. Bailey, New York, N. Y. July 15. 704,771
AUTOMATIC FIRE PROTECTING SHUTTER. T. Ohno, Takagi, Japan. July 29. 705,699

HARDWARE.

DOOR CHECK AND SPRING. V. Beauregard, Boston, Mass. July 1. 703,371
DOOR OPERATING DEVICE. P. J. Beisel, Allentown, Pa. July 1. 703,372
LOCK. C. Kunzelmann, Sackingen, Germany. July 1. 703,429
SASH LOCK AND LIFT. R. H. Price, Booneville, Wis. July 1. 703,465
LOCK. A. F. Wahlberg, Brooklyn, N. Y. July 1. 703,506
SASH LOCK. H. A. Baker, Clarksville, Texas. July 1. 703,634
SASH HOLDER. W. M. Reely, Spokane, Wash. July 1. 703,829
SASH HOLDER. B. D. Berry, Chester, Pa. July 1. 703,889
COMBINED LATCH AND LOCK. D. W. Tower, Grand Rapids, Mich. July 1. 703,975
SASH LOCK. A. M. Southard, Denver, Col. July 1. 703,976
SASH LOCK. J. A. Espitalier, Chicago, Ill. July 8. 704,014
DOOR BOLT. E. Fages, Paris, France. July 8. 704,179
SASH LOCK. C. Stimpson, Plainfield, N. J. July 8. 704,279
SASH FASTENER. A. Brauer, Seattle, Wash. July 8. 704,433
WINDOW SASH HINGE. J. Holy, Canton, Ohio. July 15. 704,541
SASH FASTENER. W. Rundell, Plymouth, England. July 15. 704,580
DOOR FASTENER. G. W. Creamer, Trivoli, Ill. July 15. 704,619
DOOR SECURER. G. F. Hamilton, Council Bluffs, Iowa. July 15. 704,634
LOCK. J. L. Coulter, Bovina Center, N. Y. July 15. 704,862
DOOR CHECK. O. Tschick, New York, N. Y. July 15. 704,862
SASH FASTENER. J. C. Lodor, Wilmington, N. C. July 22. 705,260
SASH FASTENER. W. H. Nelson, Hazleton, Iowa. July 22. 705,282
LOCK. W. A. Markey, Roshysrock, W. Va. July 29. 705,942

HEATING AND VENTILATION.

REGISTER, VENTILATOR, OR THE LIKE. H. S. Hart, New Britain, Conn. July 1. 703,409
VENTILATOR. Carpenter & Baker, Los Angeles, Cal. July 1. 703,762
HEATING AND VENTILATING SYSTEM. J. O. Randall, Silversprings, N. Y. July 1. 703,827
RADIATOR. E. Moritz et al., Watsonstown, Pa. July 22. 705,110

PLUMBING.

TRAP. J. W. Zehringen, Boston, Mass. July 1. 703,631
FIXTURE FOR WASHSTANDS, BATH TUBS, OR THE LIKE. A. P. Windolph, New York, N. Y. July 8. 704,419
VENTILATOR ATTACHMENT FOR WATER CLOSETS. S. C. Brown, Saratoga Springs, N. Y. July 8. 704,471
WATER CLOSET BOWL. H. T. Bush, Detroit, Mich. July 22. 705,319

TOOLS.

CARPENTERS' FOLDING SQUARE. E. J. Morrell, Quincy, Mass. July 8. 704,074
COMBINED LEVEL AND PLUMB. R. W. Pratt, Julia, W. Va. July 8. 704,369
BRICK CARRIER. J. G. McDowell, Pittsburg, Pa. July 22. 705,277
SEPARABLE SQUARE. C. L. F. and M. C. Hooker, Boca, Cal. July 22. 705,403
BRICK HANDLER. J. H. and G. P. Martin, David City, Neb. July 22. 705,416

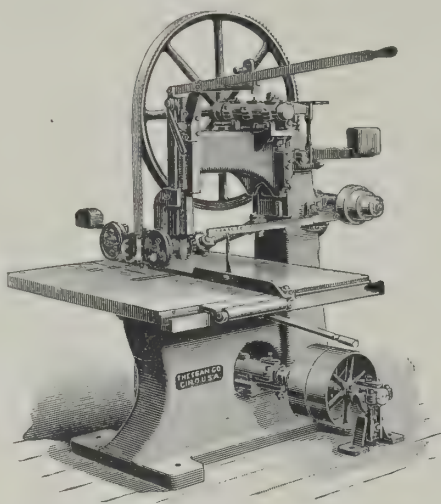
MISCELLANEOUS.

PAINTING APPARATUS. H. D. Carryl, New York, N. Y. July 1. 703,385
BUILDING MATERIAL. M. W. Marsden, Philadelphia, Pa. July 8. 704,066
STAINED GLASS WINDOW OR SIMILAR OBJECT. J. Talmay, Philadelphia, Pa. July 8. 704,399
MEANS FOR PREVENTING DUST, DRAFT, AND RAIN FROM ENTERING UNDER DOORS. J. Crowther, Invercargill, N. Z. July 8. 704,441
SCAFFOLD SPICER. J. Lally, Waltham, Mass. July 15. 704,884
PAINT. G. W. and A. J. Doore, Greene, Iowa. July 15. 704,959
PRISM GLASS FOR SKYLIGHTS. G. E. Androvette, Brooklyn, N. Y. July 22. 705,372

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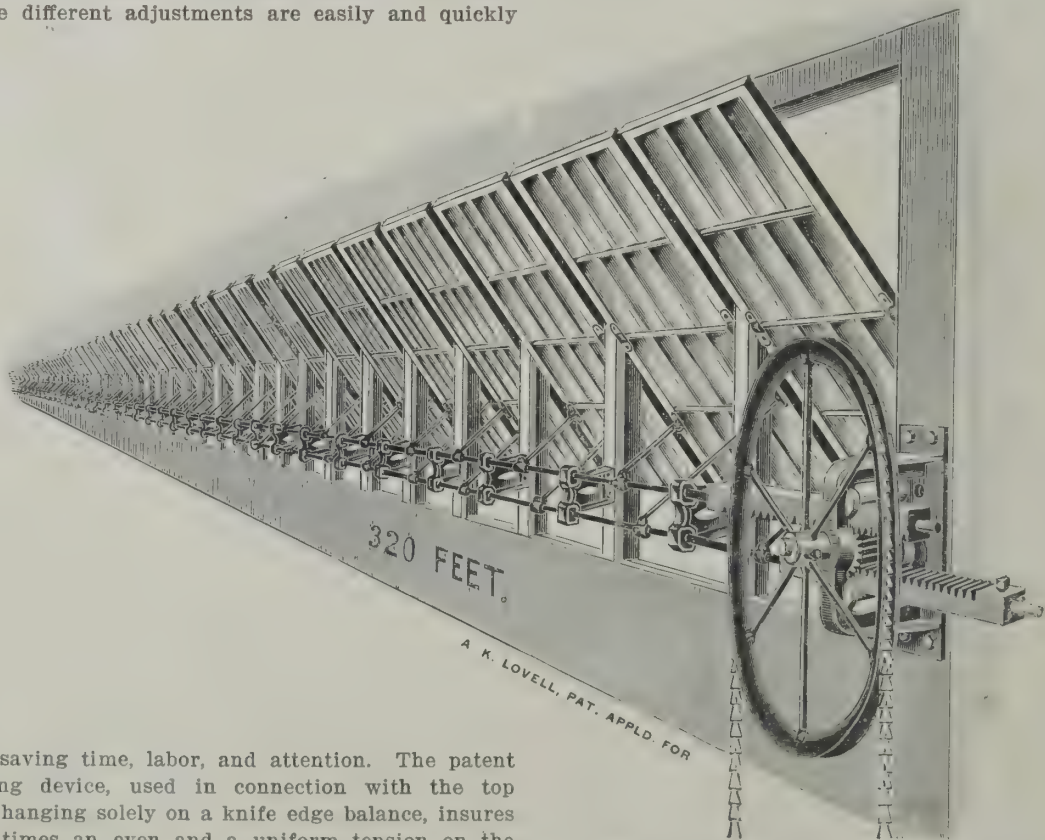
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THE well-known makers of the saw here shown claim it will surpass in quality and quantity anything in this line that they are now handling. It is designed for all wood-workers, and wherever used meets with undoubted success. The device is an entirely



NO. 1. AUTOMATIC BAND RIP SAW.

new departure in this line of machinery, being original in every respect, and the first of its kind ever brought out. The following features are worthy of special attention: It will quickly and accurately rip either hard wood or soft wood up to 24 inches wide and to 10 inches thick without changing blades, and with no danger to the operator from stock being thrown back. All the different adjustments are easily and quickly



THE LOVELL NEW SASH AND SHUTTER APPARATUS.

made, saving time, labor, and attention. The patent straining device, used in connection with the top wheel, hanging solely on a knife edge balance, insures at all times an even and a uniform tension on the saw blade—a decided improvement, which lengthens its life. The lower wheel being solid lessens the circulation of dust, increases the momentum, and prevents the upper wheel from overrunning it. Owing to the thinness of the saw blade, the slight kerf removed is a saving which will be readily appreciated by all users of fine lumber. The feed is powerful, steady, and uniform, and its rate furnished as desired. The feeding-in and feeding-out rolls being close together, the short stock may be worked to advantage. By a single movement of a lever the machine may be used as a hand feed rip saw.

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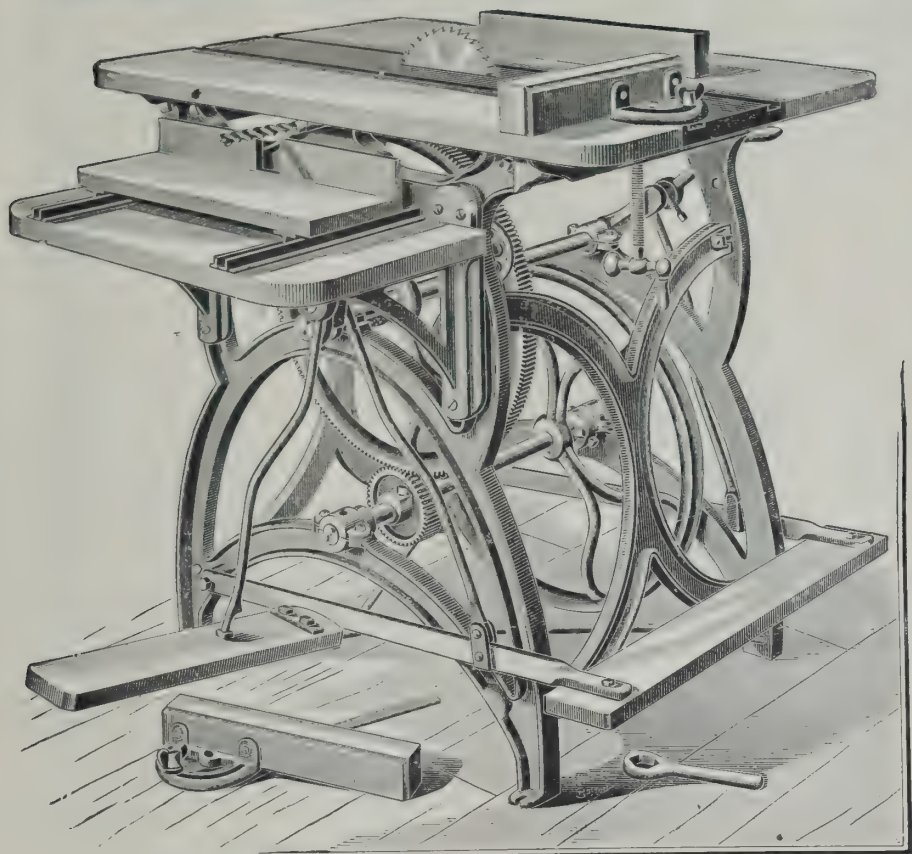
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easy and rapid operation will require this improved opener. The illustration shows a section of 320 feet of sash operated from one station just erected in a Bridgeport factory. The apparatus is strong, durable, and practical, and the G. Drouve Co. has at last succeeded in producing a perfect opening device, and it will submit estimates for the erection of the mechanism in any part of the country. Skylights and sheet metal work made by this Bridgeport firm are favorably known everywhere.

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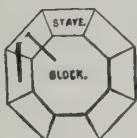
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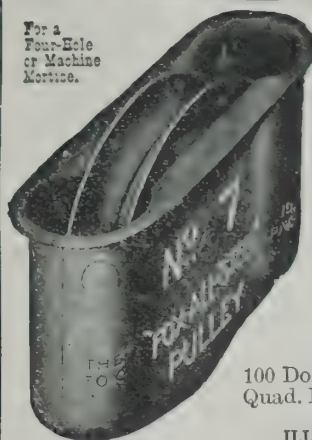
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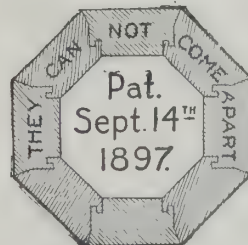
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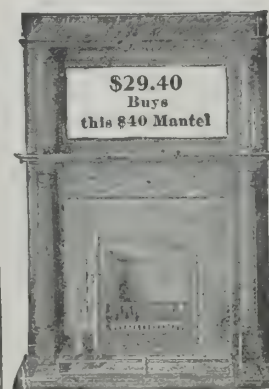
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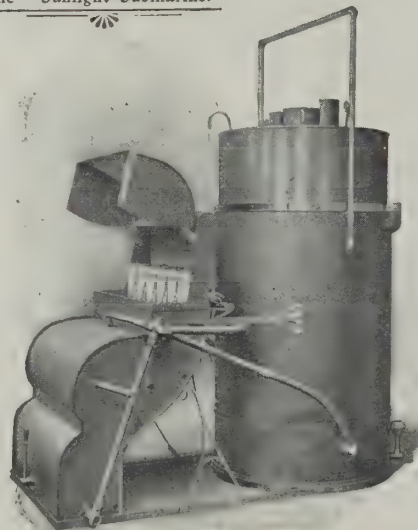
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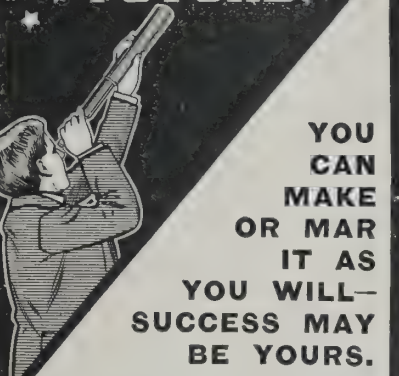
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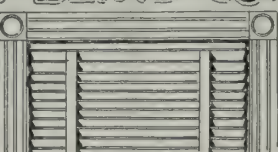


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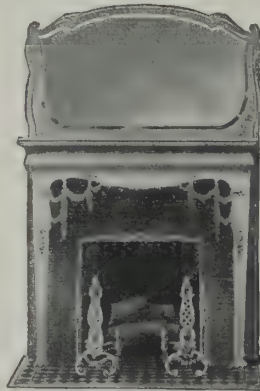
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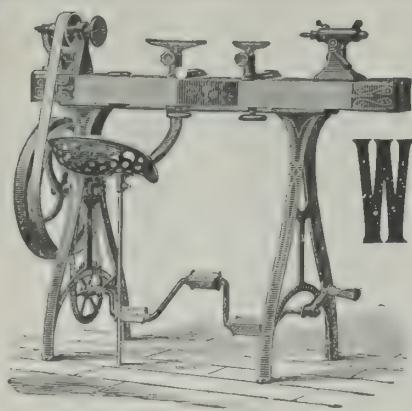
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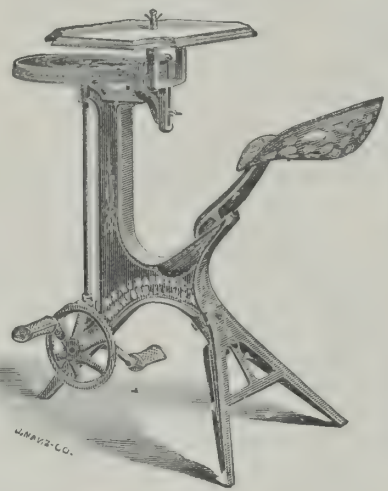
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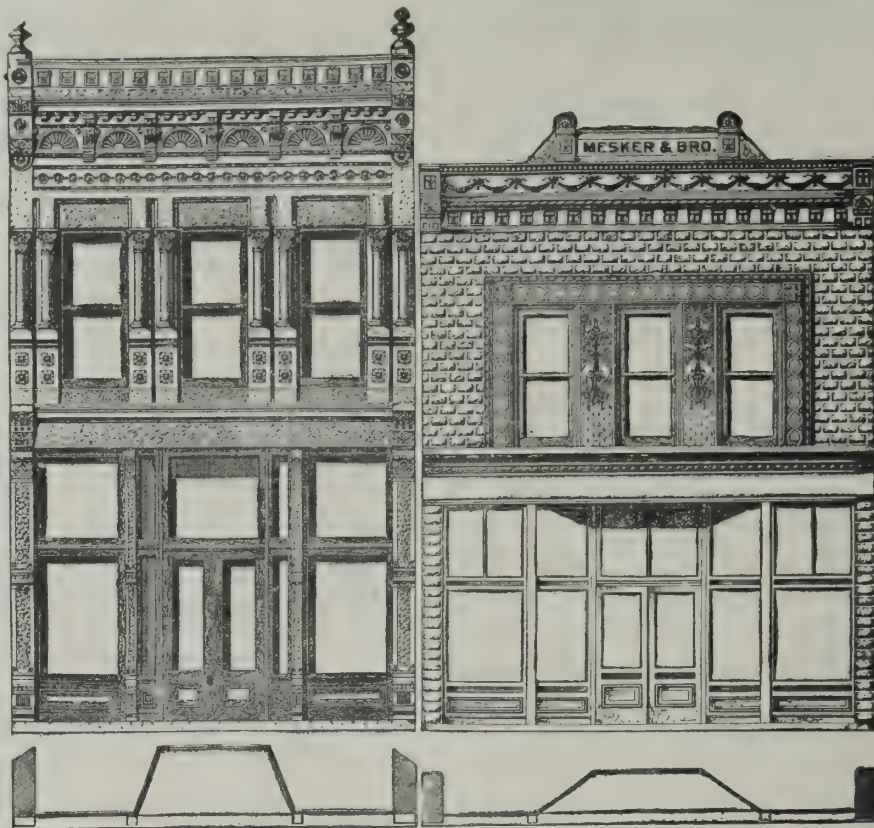
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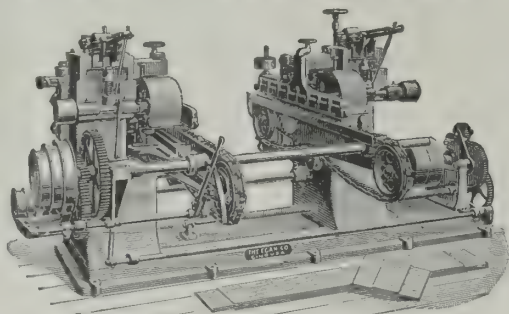
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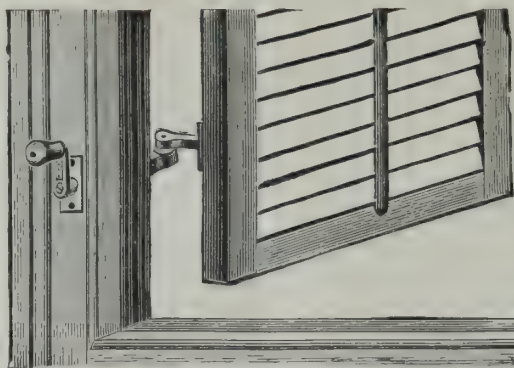
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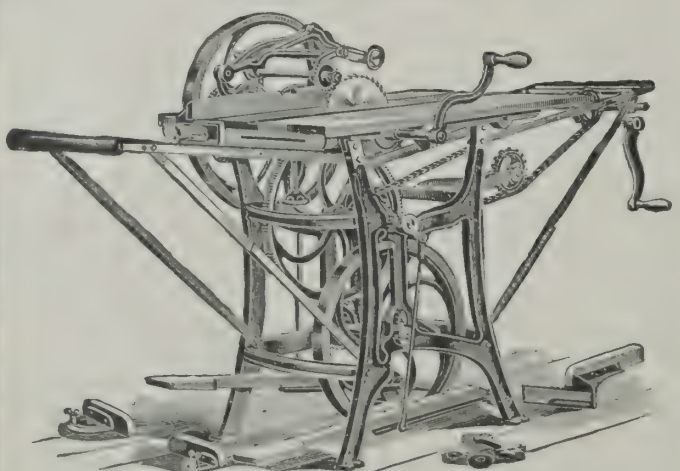
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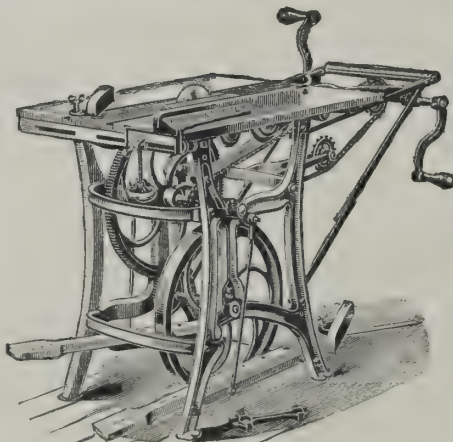
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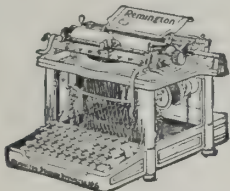
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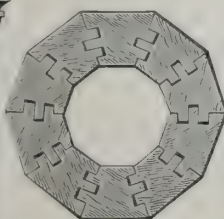
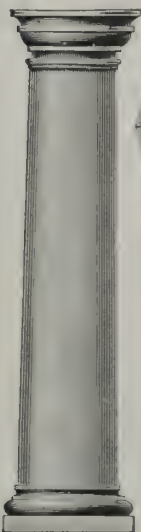
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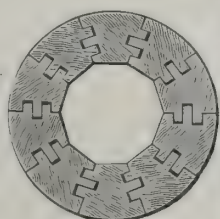
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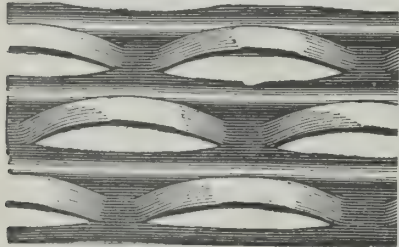
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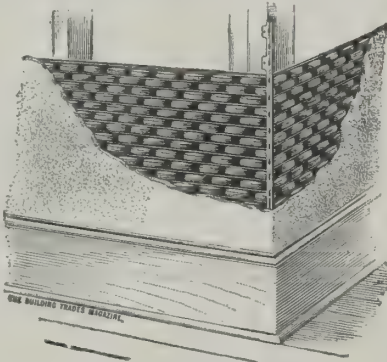
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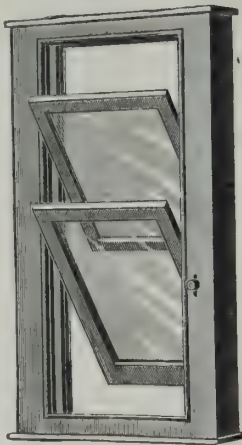
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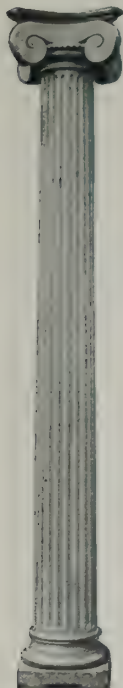
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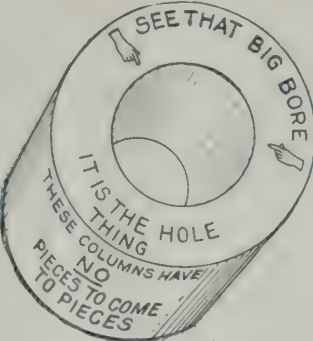
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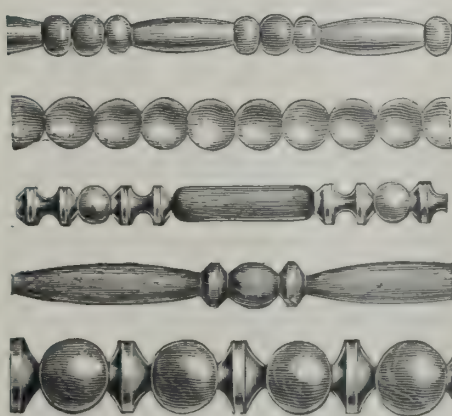
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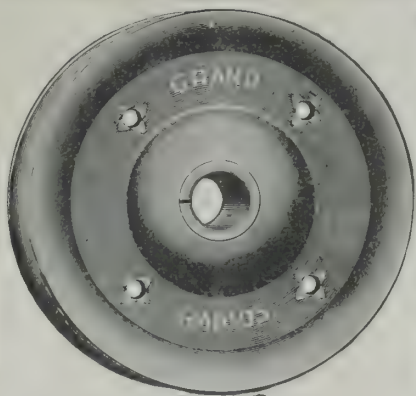
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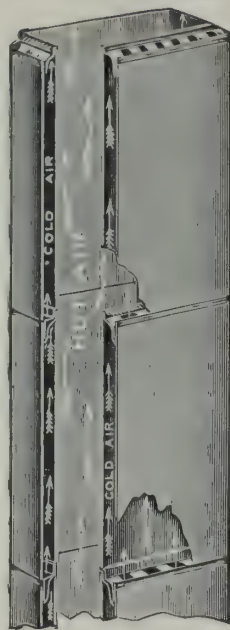
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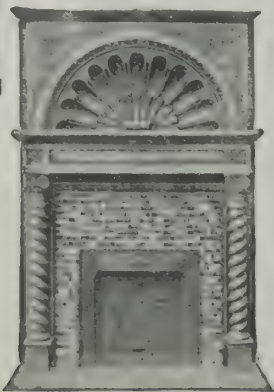
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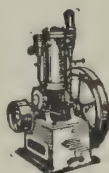
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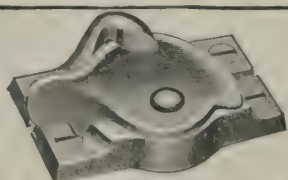
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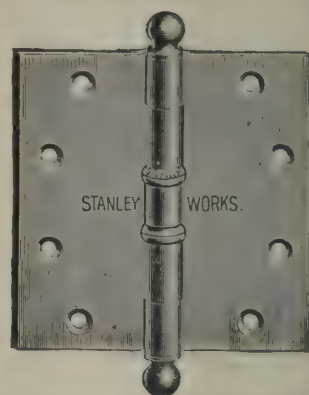
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Building Monthly.

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NEW YORK, OCTOBER, 1902

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MONTHLY COMMENT.

EVERY READER

is invited to cooperate with the Editor in making the SCIENTIFIC AMERICAN BUILDING MONTHLY the best and most useful journal of its kind.

We want every reader to personally express his opinions of this paper to the Editor. Tell us what you like about it and why you like it; tell us how you think it can be made more helpful to you.

We want every reader to consider this his or her paper; let us know how we can help you; tell us your needs; the paper is yours and for you.

New ideas are being constantly introduced; but we want *your ideas* to guide us in bettering it. Write frankly to

THE EDITOR,

SCIENTIFIC AMERICAN BUILDING MONTHLY,
361 Broadway, New York.

THE individual who insists on building his own house, either from his own designs or with his own hands, will not down. A little while ago it was a minister of the Gospel who was personally building a church; now a Western editor and a lady in New Jersey have laughed the architect to scorn and are pointing with pride to their houses, erected with their own personal labor. Every one to their taste, no doubt, and the person who desires to build his own house himself is doubtless better employed than were he doing nothing. But it is a most mistaken notion to imagine that one can dispense with an architect or that the work of one's own hands in an occupation to which one has not been trained is superior to the designs of trained architects or the labor of skilled artisans. And yet the freak buildings produced under such conditions are heralded through the land as structures worthy of publication and the doings of their owners commented upon as though they merited serious consideration.

Our land suffers from the want of architecture. That we have no models, that we are without an historic past that has found enduring expression in building is the first fact that impresses itself upon the wayfarer abroad. It is true we have some fine old Colonial buildings, and the vogue of the Colonial style in current architecture is a fine compliment to the enduring qualities of the old buildings. But these old structures, compared with the vast bulk of later buildings, are utterly in the minority and do not lighten our architectural doughiness. The European is much better off, for, as a rule, he has but to look out of his door to note interesting examples of buildings designed in an art that has become national, which are dowered with the traditions of his country, and which possess eminent artistic qualities. If he can not design he can copy.

We will never improve by designing buildings out of our heads and ignoring the architect. Presumably the architect has been trained in his profession; it is to be hoped he has some ingrain artistic perceptiveness; and it certainly is to be hoped that whatever artistic qualities he may possess he can express and give utterance to. We will not better ourselves by leaving these people alone; on the contrary, the more they have to do the better their work will be. Surely no sane man would consult a young medical student in his first year in a case of serious illness; why, then, undertake to build a house because one can use a saw or drive a nail? Some useless time may be filled in by this method, but the cause of art and the art of home building and home making will be helped not at all.

An annual competition is conducted in Paris for the six best designs for houses erected during the year. It is a happy idea that might well be copied in this country. The results in Paris are apt to be in a very advanced style of architecture, and one of the recently premiated designs, published in an English contemporary, shows a very free use of the Art Nouveau, a use striking and original, withal, although by no means as grotesque as some German designs with the same motif. The particular merit of this house, however, was not so much the design of the front as the system of construction, which was exceedingly economical in space and materials. The whole of the exterior walls was constructed after the Cottangin system of armored cement and brick and stoneware materials strengthened by steel insertions.

A note of protest has been raised in Dundee, Scotland, against the defacement of buildings by striking matches on the walls. The crime seems slight enough in itself, and yet it is so disfiguring, the habit is so readily contracted and so difficult to cure, that it is well worth while to call attention to it and to seek to bring about its suppression. And when considering small things it may be as well to suggest that the crime of writing on walls be likewise moved against. The fact that structural harm seldom results from either of these indiscretions is no reason why something should not be done to suppress them.

THE COUNTRY HOUSE.

THE country house is the center of country life. The fields, the farm, the flower beds, the vegetable garden, the lawns, the drives, are manifestations of country existence; the house is the center from which everything else develops, and by which country life is rendered not only tolerable but possible. That without the house no one could live in the country is so manifestly the fact that the mere statement appears a superfluity; and yet the importance of the house in country life is often overlooked and frequently ignored.

There are, of course, country houses and country houses. There are the vast palaces of the rich, adorned with all the luxury of the modern building art, fitted up with every possible contrivance, and intended for the use, not only of the owner, but for the accommodation of many guests, numbering anywhere from twenty to a hundred persons. These great buildings form a class by themselves; they are houses so elaborately furnished, so marvelously inconvenienced, that the utmost ingenuity seems unable to add to their superiority in any way. And yet so great is the care lavished on them that each new great house is an advance on its predecessor, and the country palace of to-day is markedly beyond the country palace of ten years past.

The distinctive characteristics of these buildings are ample size, spreading plans—since land is in abundance—broad halls, large, light, airy rooms, and an abundance of porches. The elements are simple enough, but the variety in the combination is infinite and the possibilities of elaboration without limit; cost alone is the determining element. It is a mistake to assume, however, that any kind of a house, no matter what its cost may be, will be suitable for every site. One question naturally if an Italian palace is just the sort of a building to erect on the shores of Long Island Sound, though the house itself be a work of art, designed with genius and erected with all the perfection of the

builder's craft. It is quite as pertinent to inquire if a French villa fits in naturally with the romantic scenery of the Berkshire Hills. Real progress can scarcely be accomplished through such solecisms, although much individual splendor may be most delightfully created.

From the country palace to the average country house is a vast descent in architectural grandeur, but no change at all in architectural standpoint. The popularity of country living at the present day is due quite as much to the skill of the architect as to the charms of country life in itself. The building of country houses may not, indeed, create the fame that the designing of a great public building might win, but the study given this problem has brought happiness to very many people, has created great values in country real estate, and entirely transformed the country districts surrounding our chief cities.

It is the average country house—the house of moderate cost, or at least not of great cost—that has made country life as it is now enjoyed in America. Our wealthy folk may pattern their country existence after the English model, with great houses and numerous parties of guests, but the vast estates are still in the minority, and the typical American country house is a much more modest structure and much more numerous.

In its way the characteristics of these lesser buildings are identical with those of the greater. Here also we have amplexness of plan, as many rooms on the ground floor as possible, broad halls, light, airy rooms, deep porches. And the porch is more and more coming into prominence. The aim of country life is to be in the open air as much as possible; and as a natural evolution, our porches are no longer occasional lounging places, but open rooms, furnished sufficiently for comfort and for use, and used all the time. No country house should be inferior in interior accommodation, for the country is most enjoyable in cool weather and possesses delights of its own in the cold season; but it is a prime essential of all such buildings that they be given the most ample accommodation for outdoor living.

This is the first aim of every well designed country house, and it immediately entails simplicity of internal planning. Since most of the time is to be spent without doors, there is less need for rooms within. Except in very large houses, and where much entertaining is done, the parlor or drawing-room is, of all apartments, the most useless and the most unnecessary. The careful builder, intent on obtaining the best house and the most economical in space and material, will at once erase such rooms from his plans. A spacious hall, large enough to be a room, and much more than a mere entrance to the dwelling, will more than supply any deficiency that may be felt on this score.

Other rooms will adjust themselves to the special needs of the owner. A literary man will require a library, and a small reception room may be sometimes found useful; the dining-room alone remains of the rooms which may be termed ornamental. Even this may be dispensed with in houses intended for summer use alone, and the whole first floor thrown into one great apartment, in which the various functions of living will have their special place, and the kitchen and pantry alone require separation.

From this point of view the country house resolves itself into a very simple structure. The fewer the interior divisions, the greater the sensation of space and the pleasanter the interior. A small house planned in this way acquires a spaciousness that much larger and more complex dwellings do not possess. Housework is simplified and the cares of the housekeeper measurably diminished; and these are elements whose importance the most careful architect is sometimes prone to overlook.

The upper floors of the country house hardly differ, in requirements and arrangement, from those of the city dwelling. The planning problem is easier, for there is more space and air. The bedrooms are larger than those of the average city house, and the window problem offers no difficulties. A more difficult matter is the arrangement of the uppermost story. Too frequently this is a hot and most uncomfortable place, avoided by the family and considered only of use for servants and for storage. The storage question is immaterial, but the accommodation for servants should receive much more attention than it usually does. It may be too broad a proposition to lay down the rule that the servants should have as much consideration as the owner and occupant, but it is not too much to maintain that they should be humanly treated. This being admitted, the solution must be left to the individual. Meanwhile it may be pointed out that the ideal country house is one that has an upper story or attic in which no one is expected to sleep. The top story thus becomes, naturally, a shield and protection, whose value will be appreciated once it has been experienced.

The successful country house is eminently simple, simple in plan, simple in construction, adaptable to country life. A good house helps life amazingly and is quite as important in the country as in the crowded districts of the city.

TALKS WITH ARTISTS

MR. CHARLES M. SHEAN ON OPPORTUNITIES FOR DECORATIVE ART.

MR. CHARLES M. SHEAN is one of the few artists in New York specially trained in decorative work. His position, in fact, is somewhat unique, for while he has executed many notable pieces of mural painting, he is not a picture painter; that is to say, not a painter of easel pictures. The art of mural painting, or wall decoration, requiring, as it does, a semi-architectural training as well as the conventional training of the painter, is quite different in purpose and in scope from that of the portrait painter or the painter of easel pictures, although the latter have, from time to time, been called upon to execute mural decorations. Trained in New York and Paris, Mr. Shean, who is an artist of distinguished ability and fine decorative perceptiveness, has executed a number of important undertakings in decoration in many forms, including memorial windows in American opalescent glass, and among other works, a series of panels for the music-room of George J. Gould, Esq., at Lakewood, N. J. Perhaps his most important decorations, and certainly the most success-

"Now don't expect me to present the whole case in every aspect," he returned, "but one or two principal reasons may be briefly stated: First and foremost I would place the fact that the inability, temperamentally and otherwise, of the American artists to organize and cooperate makes it necessary for public spirited bodies and individuals to take up questions relating to the embellishment of public buildings, and this they don't seem to have done—the more's the pity.

"Public buildings naturally form the first class of structures to be considered when decorative works are concerned. They should provide the largest opportunities as they certainly afford the most obvious. And yet even for these buildings the artists appear to be unable to get together, unable to formulate general schemes, unable to present the merit and value of the products of their own craft. Strange as it may seem, it nevertheless appears to be true, that we must depend on the laymen and bodies organized for artistic propaganda for the development of opinion in these important matters.

"Several classes of buildings contain opportunities for decorative work. Public buildings stand first, national, state, municipal; if I place hotels next it is only

tition for the decoration of the dome of the Court House in Brooklyn. The opportunity was a fine one, and had the idea been brought to realization it would have been a good object lesson in the value of painted decorations for public buildings. The dome is not only an ornamental feature of the Court House, but it stands at the beginning of a long corridor so much used by the public as to be practically a thoroughfare. The opportunity still exists, and perhaps some day the decorations may be executed. The vestibule of the Borough Hall of Brooklyn likewise contains some vacant places which seem likely to be vacant for some time to come.

"Let me cite a concrete example of neglected opportunity and failure to take advantage of the skill of an artist peculiarly fitted to decorate state and national buildings. The illustrations of Mr. Howard Pyle, which are so well known, are excellent examples of how large wall spaces might be made beautiful, instructive, and commemorative. For in public painting we must go to history, and Mr. Pyle's historic drawings have a real decorative value as well as artistic merit of very high order that few American artists have touched.



COURT SHOWING SUN-DIAL AND PERGOLA, RESIDENCE OF MR. FRANK SQUIER, BELLE HAVEN, CONN.—See page 76.

ful from novelty of treatment and beauty of effect, are those for the new dining-room of the Hotel Manhattan, Mr. Henry J. Hardenbergh, architect.

It was not the first time that Mr. Shean and I had discussed artistic matters (and others), and I sincerely trust it will not be the last. As was often the case we rambled desultorily over miscellaneous topics, but presently I asked him to tell me something definite for the BUILDING MONTHLY. And then the talk switched off, naturally enough, on to the opportunities for decorative art in America. Mr. Shean is nothing if not patriotic, and he rose to the bait eagerly.

"That is just the point," he said; "there is no end of opportunities so far as possible places for decorative work are concerned, so far as decorative material which the artist might utilize, so far as exciting and holding the interest of the public—all of this we have in abundance; but of actual work done, of opportunities really provided, we have little enough, so little, in fact, that it hardly counts in the vast amount of money annually spent by Americans in architecture, building, and works of art."

"What is the matter?" I queried. "Surely, if what you say is true—and I know you too well to dispute it, or even to argue the point—there must be some reason, if not several, for this remarkable state of affairs."

because painted decorations have been included in a number of recent great caravansaries; large commercial buildings, with their daily throngs of tenants and visitors come third; churches might perhaps also be included, but they stand in a class by themselves, and are seldom open all day and every day; as for private dwellings and apartments, here, of course, is no limit, save the taste and appreciation of the occupant and the amount of money he is disposed to spend on permanent decoration.

"But what are the actual conditions? Hotels I have already spoken of, and several of the more important have generous quantities of decorations. Both in extent and in quality they are, in New York, distinctly ahead of our public buildings. The Criminal Court House contains a painted decoration, and that in one court room only; the new Appellate Court House is, however, elaborately and beautifully decorated. But here the fly in the ointment, as it were, is the total lack of Americanism. Our beautiful City Hall has nothing to show, and the public buildings of Brooklyn are equally blank.

"Several years ago, as a member of the executive committee of the Department of Architecture of the Brooklyn Institute I made an abortive attempt to interest the authorities in a project for a public compe-

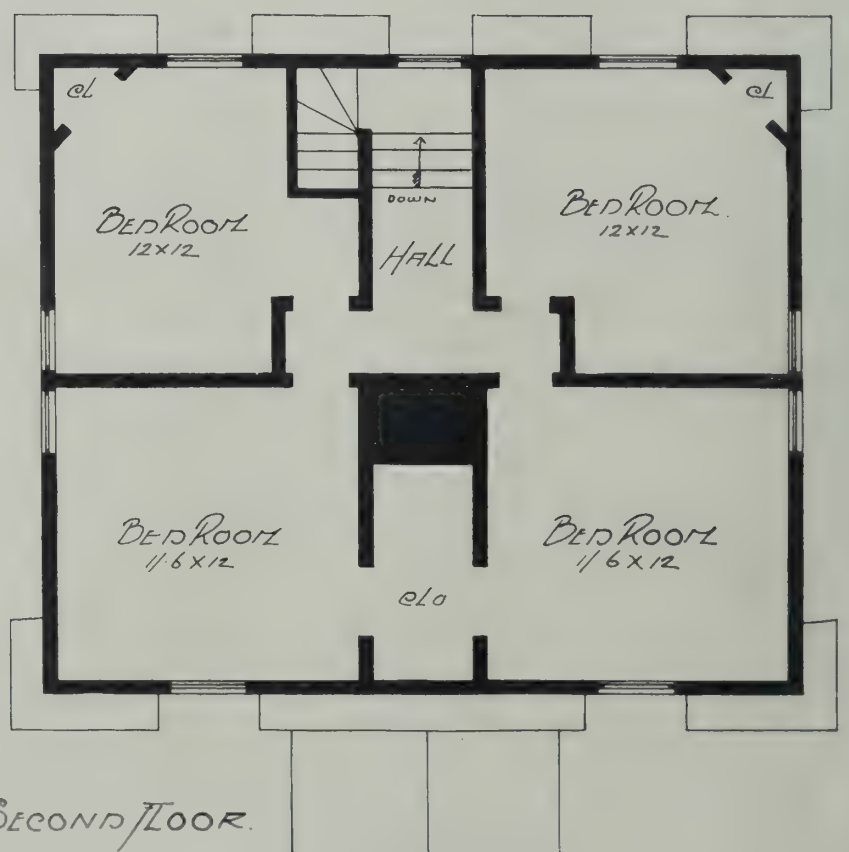
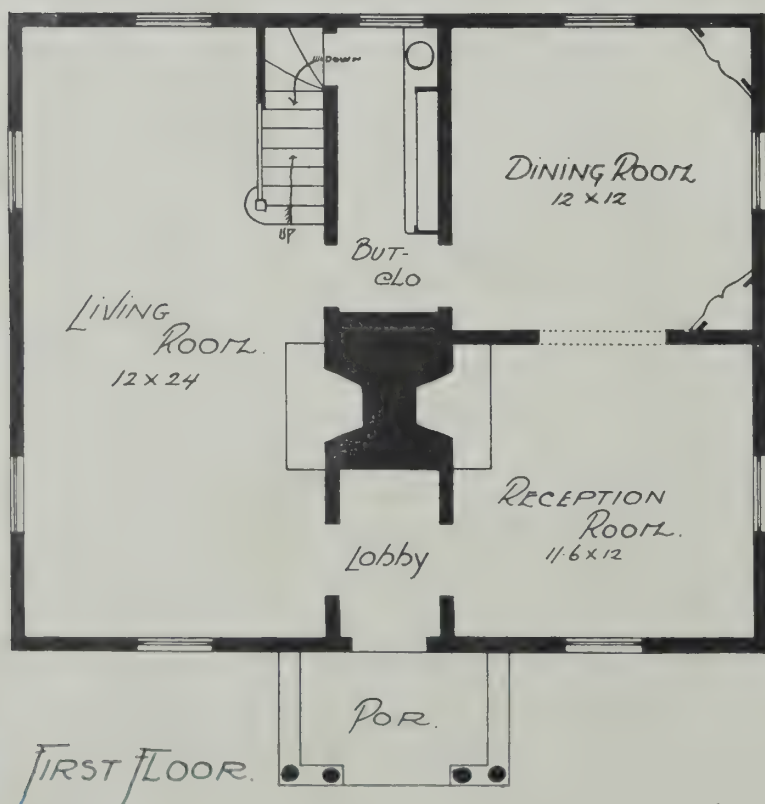
"But decoration need not be historic to be successful nor desirable. The natural scenery of our state might well form the subject of wall paintings. It is true enough that while American landscape is among the best landscape schools of the world, men capable of representing landscape subjects in a decorative way on the walls of a building might not be readily found. But given the incentive of opportunity and the proper technical skill will be quickly forthcoming."

"What do you mean," I broke in, "by a 'decorative way'?"

"It might, perhaps, take me too far afield to go into the meaning of this phrase in detail, but at least you will admit that the treatment proper to a detached and framed picture is necessarily different from the treatment required in a picture that has an architectural setting, and is a permanent ornament of any room or hall.

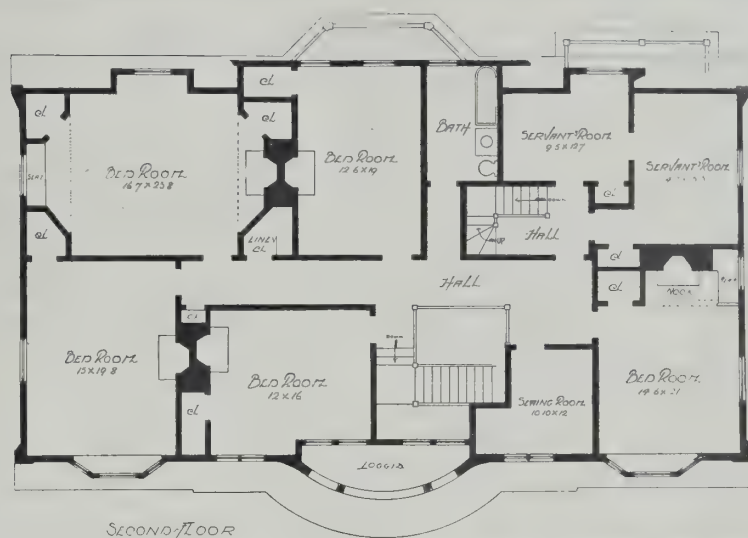
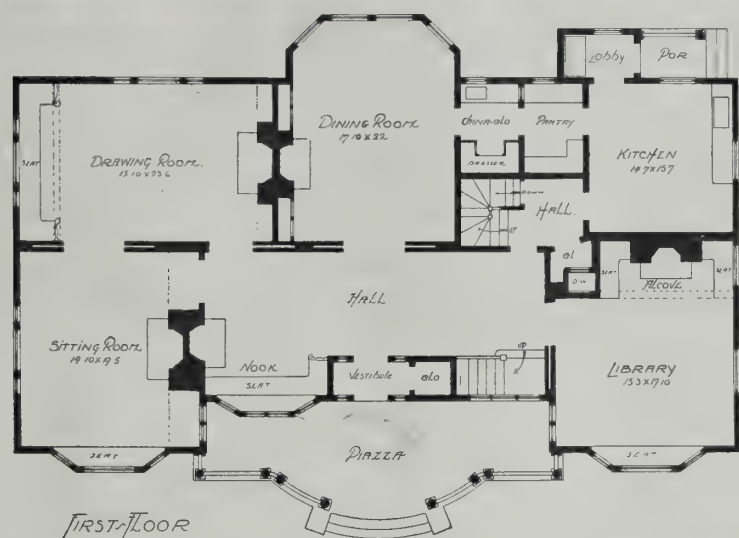
"But let us go back to the original story. If the record of public decorations in New York is bare enough, that for commercial buildings is hardly better. I recall a large decoration by C. Y. Turner for a downtown office building, a frieze for the Edison Illuminating Company by W. B. Van Ingen, a mosaic by Francis Lathrop, and a remarkably beautiful ceiling for the

(Continued on page 76.)



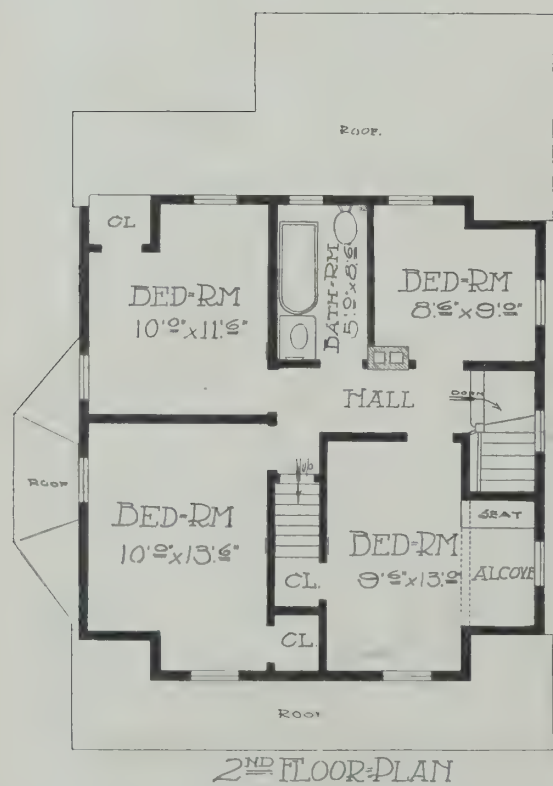
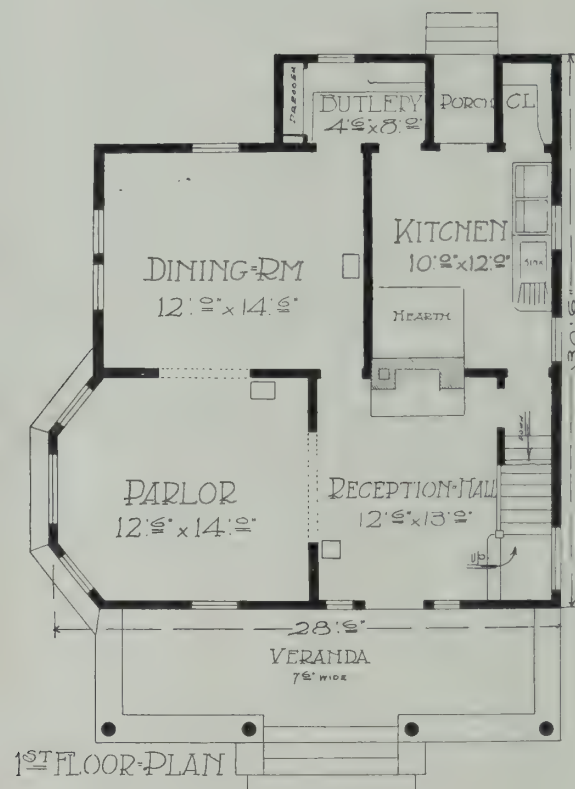
A DWELLING AT LAWRENCE PARK, BRONXVILLE, N. Y.—See page 78.

MR. WILLIAM A. BATES, ARCHITECT



A RESIDENCE AT CONCORD, MASS.—See page 78.

MR. H. S. FRAZER, ARCHITECT.

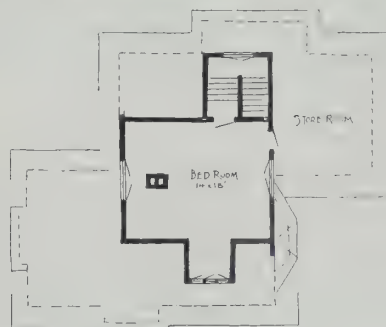


A COTTAGE AT NUTLEY, N. J.—See page 79.

MR. WILLIAM A. LAMBERT, ARCHITECT.



-- FIRST FLOOR PLAN --



-- SECOND FLOOR PLAN --



A BUNGALOW AT PASADENA, CAL.—See page 79.

MR. J. J. BLICK, ARCHITECT.



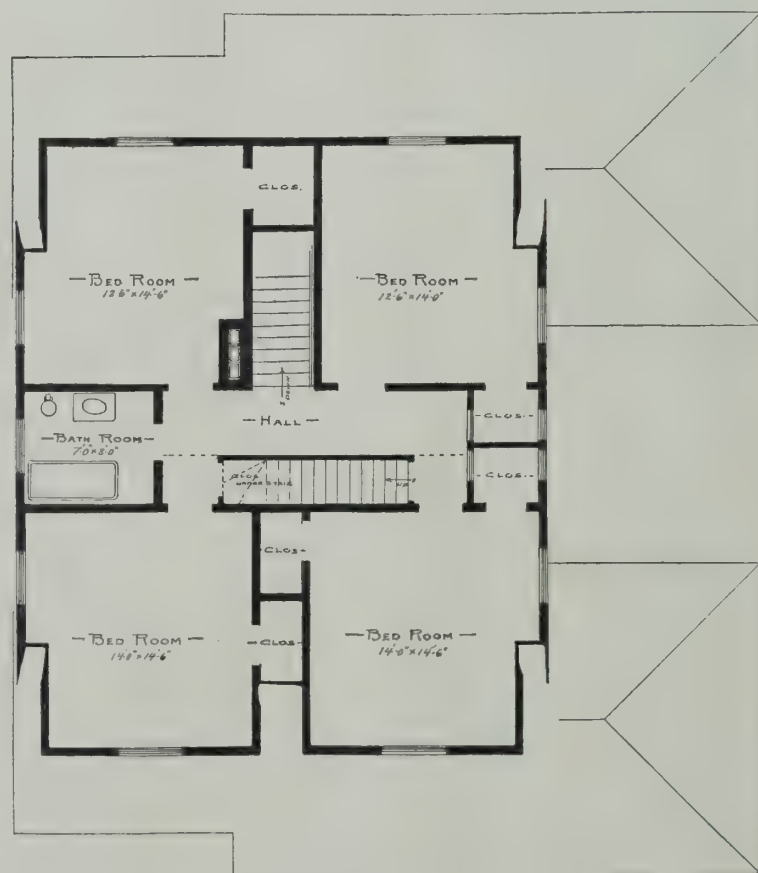
A MODERN HOME OF ART.—See page 77.



A MODERN HOME OF ART.—See page 77.



FIRST FLOOR PLAN

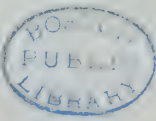
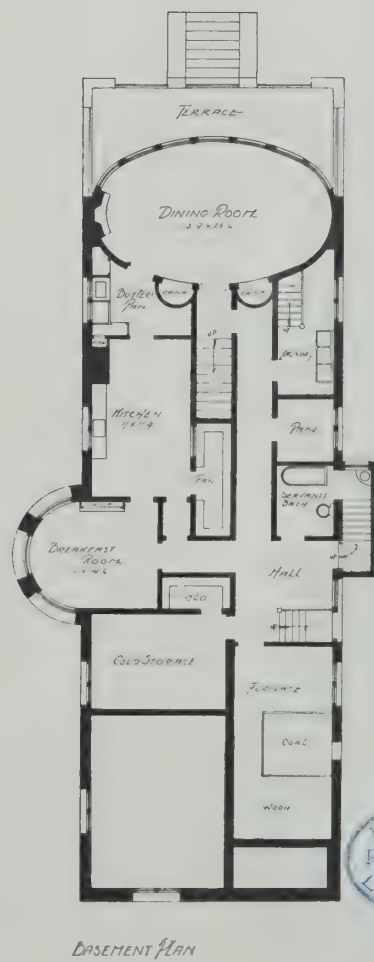
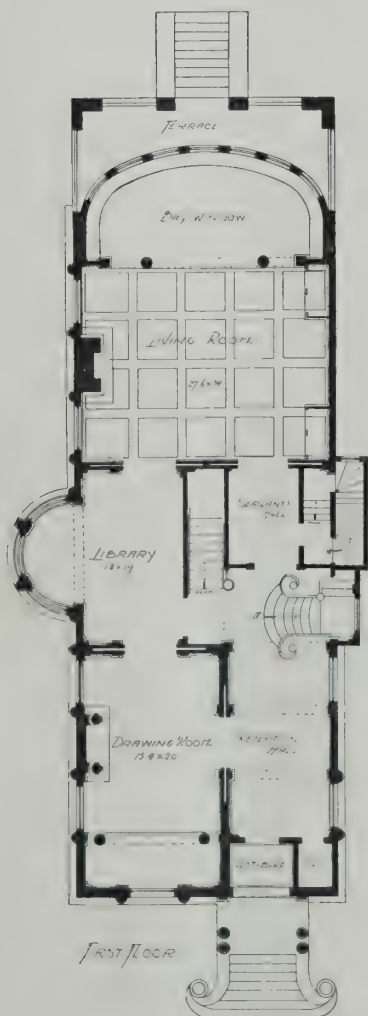


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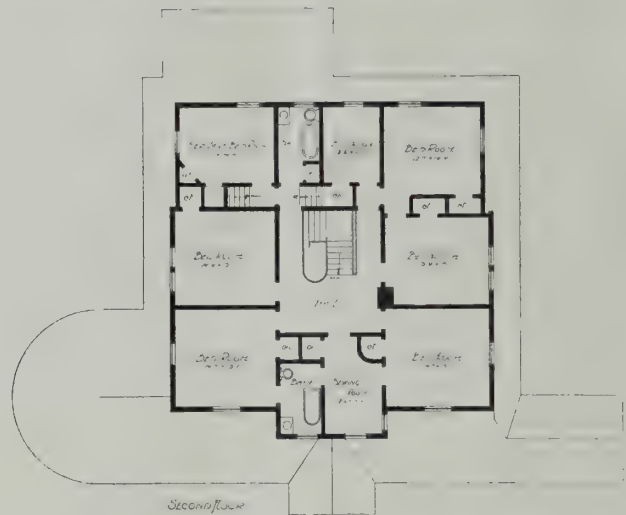


A SUMMER RESIDENCE AT SOUND BEACH, CONN.—See page 77.

MR. HERBERT LUCAS, ARCHITECT.



A RESIDENCE AT SAN FRANCISCO, CAL.—See page 79.
MR. J. FRANCIS DUNN, ARCHITECT.



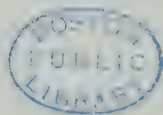
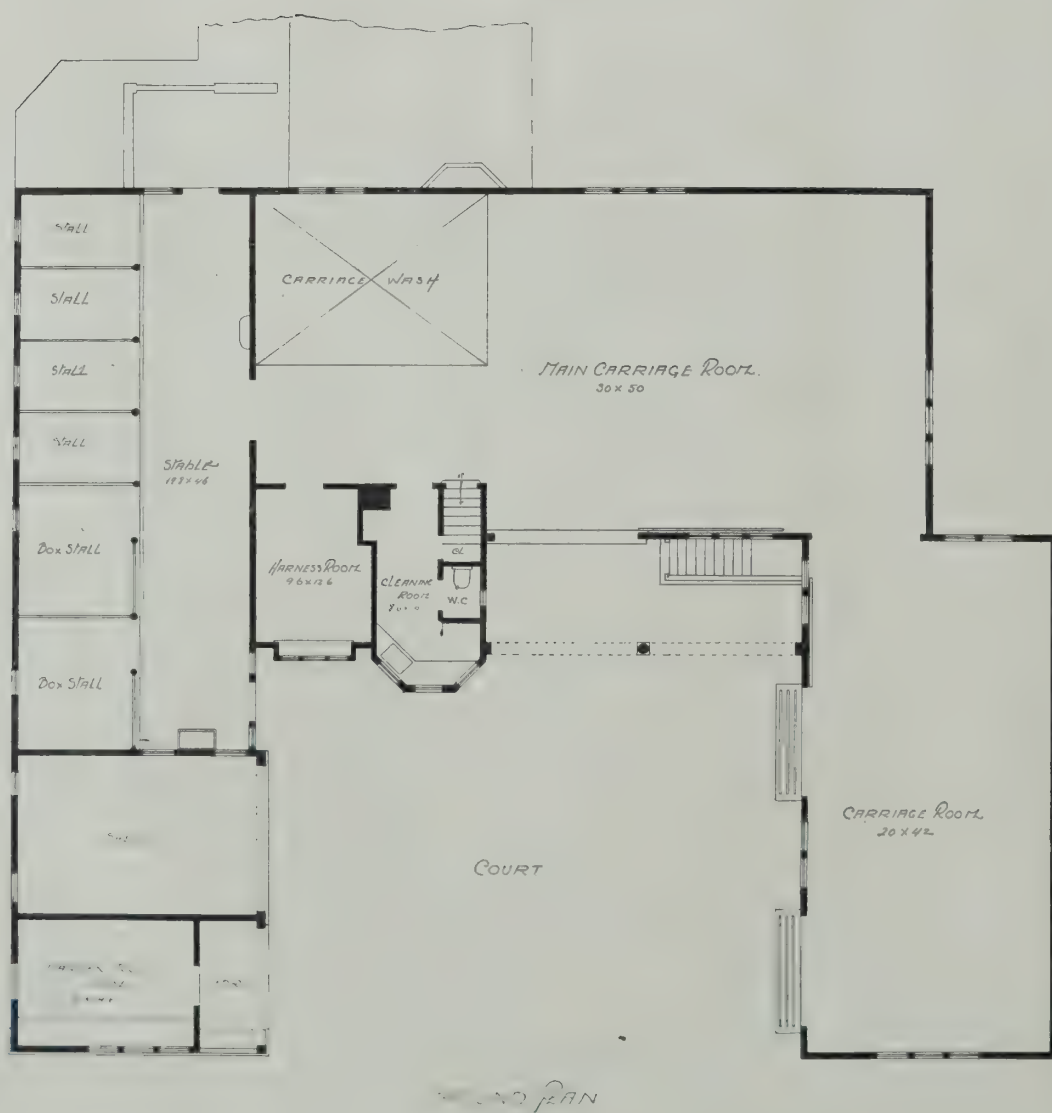
A RESIDENCE AT GLENSIDE FARMS, PA.—See page 79.

MR. CHARLES BARTON KEEN, ARCHITECT.



A GARDEN AT BELLE HAVEN, GREENWICH, CONN.—See page 76.

MR. WILSON EYRE, ARCHITECT.



A STABLE AT BROOKLINE, MASS.—See page 79.

MESSRS. CHAPMAN & FRAZER, ARCHITECTS.



A GROUP OF COLONIAL DOORWAYS.—See page 76.

The Household

A NEW IDEA FOR CHILDREN'S WORK.

A LONDON shop proposes a novelty useful to interest children, and adaptable for kindergarten work. Animals vigorously drawn in outline are traced on separate squares of oatmeal cloth or unbleached linen, the outline being marked with dots to show the length of the stitches with which it is to be worked. The work is quickly and easily done by even small children, and is carried out in wash cotton or silk. The squares may be joined with lace or ribbon, and, lined with sateen, are useful for baby-carriage covers, or may be made for covers for cots in children's hospitals. The English squares come in sets illustrating Mother Goose rhymes.

NEW FURNITURE FABRICS.

IMITATIONS of old tapestries and of old stuffs preserved in European museums continue to be placed on the market. Stronger in effect and more interesting than most loom or machine printed textiles are the ones produced on cottons and linens by the hand block process. In prices ranging from \$2 upward these fabrics are available to most persons. Still cheaper, but also with wide possibilities for charming effects, are the heavy linens, shot and plain, which combine admirably with the printed cotton borders. Bedrooms and cottage drawing-rooms are especially well adapted to the cotton and linen tapestries. At \$1 a yard can be bought plain or shot linen fifty inches wide, in any tone, such as old blues, greens, pinks, reds, yellows, and creams. This may be used for wall and furniture coverings. Then, to brighten the effect, the portieres and window draperies may be edged at top, bottom, and sides with the exquisite cotton borders produced for the purpose. In Paris, the linen taffetas, as the linen tapestries, are commercially known, are widely used for upholstering gilt drawing-room furniture.

A SUGGESTION FOR A HALL.

THE first impressions of the household interior are gained from the hall. In many respects it is the most difficult part of the house to treat effectively. If it is long and narrow, with hardly room for the stairs, the problem is almost unsolvable; but the interior designer does not balk at difficulties, and the hall should not be neglected because it presents artistic problems that are hard to solve. A contemporary makes these suggestions for treating a hall: A good color for the woodwork of a reception hall would be either natural or green oak. If the former is used the wall paper may be steel blue or green. With the latter either a rich red or tan can be used. Solid color burlaps are very suitable for the walls. The ceiling should have some decoration in heraldic or Gothic style. If the hall is square and spacious it may be treated as a room, being furnished with pictures and ornaments. If the floor is of hardwood, an Oriental rug in proper colors will lend a charm and the appearance of coziness and comfort. In hangings there is an overabundance of fabrics which may be used to good advantage, such as tapestries and velours, Verona velours, and velours with leather appliqué or borders.

THE HOUSEHOLD LINEN

A DAILY paper summarizes the kinds and varieties of linen needed in the average household. One may, it says, buy almost any sort of linen, store hemmed, nowadays. The hurry and rush of modern life, the requirements of big hotels, clubs, etc., have demanded that concession, but the girl who is cut out for domesticity will prefer hemming and working her own linen. Of course the supply she will need will depend upon the position she will occupy, but it is hard to get too much linen, and certain basic rules of selection every one may follow. First, there is the kitchen supply—cup towels, glass towels, roller towels, dish towels, cheesecloth dusters, tick-covered iron holders, a bag for clothespins, cottonflannel bags to draw over brooms when wood floors are to be brushed. All these are to be hemmed, worked with one or two initials, and laid away in the linen chest. Then there is the servants' linen, a bountiful supply of sheets, pillow slips, towels, spreads, tablecloths, napkins, not necessarily of very fine quality but carefully selected, durable, well worked.

PERMANGANATE of potash makes a good floor stain. It should be used in the proportion of an ounce and a half to a gallon of boiling water, and applied with a painter's flat brush, working with the grain of the wood. A second coat may be applied if necessary.

MR. CHARLES M. SHEAN ON OPPORTUNITIES FOR DECORATIVE ART.

(Continued from page 63.)

Prudential Insurance Company in Newark, N. J., by E. H. Blashfield, sketches for which were shown at the last exhibition of the Architectural League of New York. There may be others, and other work may be in progress; it is perhaps a sufficient point to make that the sum total of such decorations, compared with the number of large office buildings in New York, is so small that it taxes the memory to make out this very meager list.

"Nor is that the only thing. Vast sums are spent in building in this city, and in our other large cities, and hardly anything at all in decorative art, either painting or sculpture. The value of such things seems to be unappreciated, and the fact that they would add to the interest of the buildings, that they would attract people to them, and that their cost would, compared to the total cost of the buildings, be comparatively slight, appears to be quite unknown and unappreciated.

"Yet surely the governing bodies of great corporations contain persons of public spirit and artistic perception who must see the advantage of the proper embellishment of their structures; but it would seem that, looking upon them as purely commercial enterprises, they regard artistic embellishments as unnecessary.

"Opportunities for decorative art in America? They are absolutely without limit. The subjects, the themes, the possibilities are equally endless. There is a lot that might be done, and a lot of places in which it could be carried to admirable conclusion. And yet, as a whole, neither the artists on the one hand seem to know how to set about obtaining these opportunities, and on the other, the public appears to be indifferent to them. But surely this condition can not last indefinitely. Some efforts have been made, some fine work has been done, some appreciation has been manifested. I am full of hope for the future of our decorative art."

BARR FERREE.

A GARDEN AT BELLE HAVEN, GREENWICH, CONN.

THE illustrations shown on pages 63 and 73 present some of the garden treatment surrounding the residence of Mr. Frank Squier, at Belle Haven, Greenwich, Conn., of which Mr. Wilson Eyre, of Philadelphia, Pa., is the architect. Of the many interesting features that make these garden studies worthy of attention there is none more striking than the simple and effective manner with which the work has been treated by Mr. Eyre. The pergola surrounding the entrance court, in the center of which there is a sun-dial resting on a white marble pedestal, forms the principal characteristic of this estate. It consists of a double row of Doric columns extending across the three sides of the court, which support a vine-covered, beamed and cross-beamed section, as is shown in the illustration. At the east of the house are two Doric porches of similar size and treatment, between which the greensward is pierced by one of MacMonnies' basins. Beyond these porches a short cut carries one to the grove, which is well planted, and through which a walk is cut, winding down to the sunken garden. The garden, which is more formal in its plan, contains well trimmed hedges and cleanly kept walks, while between both may be found the flower garden, and also the vegetable garden, which has its place. The garden steps, which are shown in the illustration, connect the various terraces from their different heights, and at the intersection of which are erected summer houses, that are now covered with vines of the crimson rambler order. The whole treatment of the garden-work is most successful, and shows what can be done in landscape art when given close study.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A GROUP OF COLONIAL DOORWAYS.

THE group of doorways which are illustrated on page 75 present three examples of the treatment of a doorway in the Colonial style. The subject, number one, represents the doorway to the residence of Col. Herman Dowd, at South Orange, N. J., of which Mr. Robert S. Stephenson, of 1133 Broadway, New York, was the architect, while number two shows the doorway to the residence of Mrs. M. E. Badeau, of East Orange, N. J., and number three the entrance way to the residence of Dr. J. A. Osman, at Glen Ridge, N. J.; Warrington G. Lawrence, of New York, was the architect.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

THE newest lamps are symphonies in green and are called Chanjade. The bowls are of gunmetal or bronzed metal, and are inclosed in a greenish shaded ware, a compromise between glass and china. The shades or globes are of the same material, and of curious designs. One spreads out stiff and straight like a Chinese coolie's hat, and is ribbed with lead.

The Garden

A PRACTICAL SUGGESTION.

THE early fall is the time of times to look forward to next year's garden. And the reason is very simple. September is the month of realization. The plants that were set out in the spring have reached maturity. It is now possible to judge of their effect, to note combinations that are not the best, to see where certain schemes may be improved, and to observe how some plants flourish better in one locality than in another. In other words, this is the time for the garden notebook, in which the observations of the final season should be entered and suggestions noted for another year. Very likely as not, one's neighbors' gardens are full of ideas for what one may do one's self another time. All these things should be written down, and a careful note made of everything likely to be useful in another season.

BEAUTIFYING COUNTRY ROADS.

A MOVEMENT started in New England now is to plant trees and shrubs along the roadsides to enhance their beauty, remarks Harper's Weekly. The plantings are far enough back from the roadway so that branches will never interfere with passing carriages, and steps are taken to keep the ditches free from all obstructing growths. It is asserted that if farmers would give as much attention to trimming and caring for these trees and shrubs as they now devote to ruthless cutting down of everything along the roadside in the fall of the year, they would thrive and produce artistic effects.

The selection of the proper trees and shrubs for the different roads is a matter for local consideration, but those which do not harbor insects injurious to field crops, and which give the most striking effect to the landscape, are recommended. These trees should be trimmed high, so that surrounding views of the country will not be shut off, and in this way one will get the benefit of the shade without spoiling the view. Such artistic treatment of the roadsides requires judicious management, but systematic study of the subject is now being carried on in different parts of New England, and it is expected within a year or two a decided change for the better will be noticed along the leading country highways. Unsightly hedges and close-cropped roadsides, with a general air of neglect and untidiness, may then disappear entirely, and the traveler will find constant feasts for the eye as he rides or drives through the country.

A JAPANESE GARDEN NEAR BOSTON.

THAT delightful newspaper writer "The Listener," of the Boston Transcript, has discovered an ingenious experiment in Japanese gardening within the city limits of Dorchester on an ordinary city lot. The owner, he writes, is one of the first and most enthusiastic of the Bostonians who have become interested in the Japanese people and Japanese art. He has, in his yard containing the conventional city lot or two, contrived to have represented some of the most important principles and materials of the exquisite Japanese gardening, which was brought to its perfection a thousand years ago. Japanese gardening, it should be understood, aims to present not merely specimens of plant growth, but to suggest the whole face of nature together with the sentiments inspired by its various aspects—even to tell a whole story, perhaps, whether from romance or from history, in the arrangement of rocks and waterfalls, eminences and depressions, trees and flowers.

There are, for instance, a score of different kinds of rocks set down in the old canons of Japanese gardening, as say, rock of the desert, the waterworn rock from the bed of the river, the rock suggesting the straight-up side of a mountain, stones that are peculiar in shape with some likeness to animal forms, to be helped out by shrubbery upon or about them. Again there are the various objects of worked stone, hollowed in the form of huge lanterns, without which no Japanese garden would be complete. Then the whole may be arranged so as to present either a pastoral, peaceful valley scene or the romantic defile of a mountain pass, or the shores of an inland sea in miniature.

The Listener's Dorchester friend has whole groves (in flower beds) of maple trees two or three feet high, with tiny leaves finically cut and strangely colored, similar collections of oaks and other condensed forests, and one curiously stunted and twisted pine that, taken in connection with the round-backed rock near which it stands, suggests a heron thrusting his long bill into the ground.

Fire Protection

AN INTERNATIONAL FIRE EXHIBITION.

It is proposed to hold an International Fire Exhibition at Earl's Court in London in 1903. Every possible effort will be made to insure that the exhibition shall be eminently practical and instructive, and present an exhaustive picture of everything relating to the subject. The classification of exhibits into groups and divisions will receive most careful attention; the question of fire preventive methods of building construction and equipment will be accorded equal importance with the question of fire brigade work and organization. The following classification has been adopted:

1. *Building Construction.*—Fire-resisting materials and systems of construction; steel construction; wood construction; doors and glazing; screens, shutters and blinds; protective coverings; impregnated materials.

2. *Building Equipments.*—Theaters and places of public entertainment; workshops, factories, warehouses and docks; hospitals, prisons and asylums; churches and places of worship; museums and galleries; gunpowder factories and storage of explosives; oil stores, ships and wagons; ship equipment; equipment of mines, etc.; safes, banks, and deposit buildings.

3. *Electrical Safeguards.*—Wiring safeguards, conduits, casings, etc.; switchboards, fuse-boxes and registering appliances, etc.; lightning conductors, etc.

4. *Heating Safeguards.*—Stoves, ovens, and flues; cleansing of chimneys; hot-water, hot-air, and steam-heating appliances; pipe casings and coverings.

HIGH INSURANCE RATES.

THE prevailing high rates for fire insurance naturally provoke protest. A Philadelphia paper, in discussing some recent rate raisings in that city, points out that rates ought not to be raised indiscriminately. Each policy, it adds, is a distinct contract, and any company is at liberty to refuse insurance on property that appears unsafe or to exact an additional premium for additional risk. If the companies or their agents fail in intelligent discrimination and suffer loss in consequence, they have no right to make their substantial customers suffer for their fault. They can make their rates on dangerous buildings prohibitory if they will. They would then not need to levy prohibitory rates on the property from which their secure income is derived.

INSTRUCTION IN FIRE PROTECTION.

AN important new departure has been made in Boston in the establishment of the Insurance Engineering Experiment Station, in connection with the Boston Manufacturers' Mutual Fire Insurance Co. Every one has, for a long time, been aware of the enormous annual fire loss in this country, much of which comes from carelessness and much from ignorance—ignorance of how to build and how to use building materials. College after college has equipped itself with instruction in the art of building houses, but the knowledge imparted in the art of preserving them has been extremely small. It is to the credit of Boston that a central bureau has at last been established where the various problems now generally grouped under the head of "Insurance Engineering"—a term hardly a happy one—may be studied and useful experience gained. No more notable effort has been made in this country for lessening the fire evil.

"FIREPROOF" WOOD.

MUCH discussion is now being had on the merits of "fireproof" wood. It has been largely occasioned by a provision in the New York building law requiring the use of such wood in structures of a certain height. On one hand it is claimed that wood is not fireproof and can not be made so; on the other the value of several of the processes now in use is valiantly upheld. As a matter of fact even the opponents of "fireproof" wood admit that it retards conflagration, and when burnt burns slowly, with a small flame tending to rapid extinguishment. It seems quite impossible to look for structures built entirely out of fireproof material—without any interior wood and without interior finishings. But we can build buildings that resist fire, which are slow to burn, and which are measurably superior to structures erected without regard to these safeguards. That seems as far as we can go at present. It seems hardly justifiable to reject "fireproof" wood because it may burn under unusual and dangerous conditions.

A SUMMER RESIDENCE AT SOUND BEACH, CONN.

THE summer residence presented on page 70 was erected for Mr. Edwin J. Lucas, at Sound Beach, Conn. The underpinning and the balustrade to the piazza are of field stone laid up at random. The superstructure is covered with shingles on the exterior and left to weather finish. The roof is shingled and treated in a similar manner. Dimensions: Front, 32 ft. 6 in.; side, 45 ft., exclusive of the piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The entrance is into the living-room, trimmed with white pine and treated with white enamel. It has a paneled wainscoting and ceiling beams, and also contains an open fireplace built of field stone with the facings of the same and a hearth of red brick. The hall, separated from the living-room by an archway, is treated in a similar manner, and contains two paneled seats and an ornamental staircase with turned newel, balusters, and rail. The dining-room is trimmed with white pine and finished natural. It has a bay window and a paneled seat, paneled wainscoting and ceiling beams. The butler's pantry is provided with drawers, dressers, sink, and cupboards complete. The kitchen is trimmed with white pine and is finished natural with hard oil. It contains a sink, range, and well fitted up closets. The lobby is of sufficient size to admit ice-box. The second story is trimmed with white pine and treated with white enamel, and contains four bedrooms, closets, and bathroom; the latter being wainscoted, tiled, and furnished with Ronalds & Johnson's porcelain fixtures and exposed nickelplated plumbing. There are three rooms and a trunk-room. There is a cellar under the whole of the building with a cemented bottom, and contains a furnace-room, coal and wood bins. Mr. Herbert Lucas, architect, St. James Building, 1133 Broadway, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A MODERN HOME OF ART.

THE modern home of art which is illustrated on pages 61, 68, and 69, is the studio of Mr. A. A. Anderson, the portrait painter, located in the Bryant Park Studios, at Fortieth Street and Sixth Avenue, New York. Mr. Anderson's studio, which is the subject of these illustrations, occupies the two upper floors of the building, for his suite of living rooms and working quarters. The studio proper, which is fifty feet square and twenty-five feet high, occupies the top floor, and presents many attractions, including the massive eighteen foot high doorway, which once served as the entrance to a Venetian church some four hundred years ago. This doorway, with its tones of sienna and old gold, and ample columns supporting an elaborate portico, furnishes the keynote for the color scheme of the entire studio, which is of gold and gray. The principal decorations of the walls are the paintings and hunting trophies, and while the ceiling does not yield the same freedom of mural embellishment, a very happy result is obtained by the treatment in its gradually darkening shades of color, which fade away into a hazy effect. Each corner of the studio represents a distinct style in its furnishings, one Oriental, another Romanesque, and another Gothic. Within the archway, next to the Venetian doorway, is an attractive piece of Gobelin tapestry. A portrait of Mr. Charles Stewart Smith, which has just been finished by the artist, is shown in the illustration. A frieze of the dancing girls from the Borghese Gallery at Rome may be seen above the portrait of Mr. Smith. The chief subject of the studio is the three paneled painting, "Neither Do I Condemn Thee," which is also shown in the illustration on page 61. The reception-room is modeled after the Château Rambouillet, near Paris, in white and gold, and daintily furnished in the style of Louis Quinze. Adjoining the reception-room is the main salon, with walls and ceiling in carved quartered oak in silver bronze. The furniture is of the Henri II. period, which harmonizes with the rare collection of antiques which Mr. Anderson has been fortunate enough to secure for this room. Beyond the salon is the sleeping-room, which is furnished in pink and white in Louis Quinze style. The walls are paneled in rose tints, blending delicately with the other color tones. The white tiled bathroom has a marble bath sunk into the floor. The dining-room presents an interesting study of the Gothic style of furnishings. Green and gold are the dominant colors. In one corner there is a massive Gothic door of the sixteenth century style, which once served its purpose in a church in Paris. The walls are paneled from the floor to the ceiling, while the latter is groined. The remainder of the apartments are decorated and furnished in harmony.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

MORE than eighty portable schoolhouses were opened in Boston in September. Not decorative or even architectural, these structures appear to have a value.

The Flat

THE LARGEST APARTMENT HOUSE.

THE Ansonia, a seventeen-story structure, which occupies the entire block on Broadway, New York, between Seventy-third and Seventy-fourth Streets, is said to be the largest apartment house in the world. Some idea of the magnitude of the hotel may be formed from the fact that it contains no less than twenty-five hundred rooms above ground. The building is supplied with many novel arrangements for heating, ventilation, and the supply of hot and cold and iced water. The basement contains a veritable museum of twentieth century innovations. Here are a storage, repair, and charging room for automobiles; a grocery depot, where everything in the line of eatables and household necessities may be obtained by the tenants at standard prices; a butchery, a bakery, a milk depot, a barber shop, a laundry, ladies' hair-dressing and manicuring parlors, safe-deposit vaults, cold-storage rooms for furs, etc. There is also one of the largest swimming pools in New York, which it is intended to use for a swimming school.

A NOVEL BATH.

THE Evening Post (New York) is responsible for the following incident. The victim was seeking a flat and walked through the various rooms, living-room, dining-room, the two bed chambers, maid's room, and looked carefully at the little private hallway.

"Where's the bath?" he demanded, suddenly.

"What?" asked the Irish woman, stolidly.

"The bathroom, the natatorium, the place where one swims in the morning," said the young man good humoredly.

"Come with me," said his cicerone.

She led the way into the kitchen, walked over to the washtubs, and pushed up the cover.

"These," she explained carefully, "are the tubs for washing your clothes in, but by doing this (deftly removing the partition between the basins), you have a tub for bathing. The gentleman that's just moved out liked it. He used to laugh himself sick, so you could hear him all over the house every morning when he went to take his bath, and whenever his friends would come to see him they would always ask him to let them see his tub. He was a most peculiar young gentleman. He said I was to always show this tub first thing to anybody that I didn't want to come into the flat to live."

FLATS IN LONDON AND NEW YORK.

A CORRESPONDENT of the London Chronicle draws some interesting comparisons between flats in London and in New York. In New York all flats, of whatever size and price, can be rented for a term of twelve months, the rent being payable monthly. This is the universal system. American landlords expect at the end of each year to be called upon to repair the flat for a new tenant, or for the old tenant if he elects to stay on. If a three years' tenancy is entered upon, a handsome reduction is made on the sum total of the annual rent. An English landlord is horrified by the mere notion of spending any money in the way of repairs and decorations oftener than once in three or five years. The American landlord not only puts the place in thorough order for you when you take possession, but keeps it so. That is to say, if anything goes wrong with the stock fixtures, the door locks, windows, kitchen range, radiators, and water supply, the landlord instantly and without grumbling has it mended at his own expense, unless, of course, the defect has arisen through some gross negligence on the part of the tenant. In a word, all reasonable demands are promptly met and responded to—the landlord being obliged to meet the tenant more than half way at the risk of finding an empty flat on his hands when the year is up. This is the advantage of the short lease system: it releases the tenant from the thralldom under which he ineffectually curses in England, and makes it possible for him to open negotiations, not as a suppliant, but as a free man.

THE DISAPPEARING DWELLING-HOUSE.

FEWER private dwelling houses are being erected in Manhattan than at any previous time in the history of the borough. The population continues to increase, but the individual house is rapidly becoming a rarity. Meanwhile the flat and the apartment house continues to grow apace. Their increase is perhaps not so much due to their actual popularity as to the enormous rentals for single dwellings and the great variety of improvements introduced into the new buildings.

Civic Betterment

CITY MAKING.

IN an address on "City Making," at Chautauqua, Mr. Albert Kelsey, chairman of the Committee of Experts of the Art Federation of Philadelphia, summarized some of the more important elements concerned with this subject. City making, he said, though a highly specialized art involving many professions, is understood by a few, and many units, at least, of some of our great centers are already organized and built according to really modern ideas. In most cases, however, unity is lacking. First of all, the problem is one of social science, in which public and private vested interests must be conciliated. Of our own cities, Boston understands it best, though, as far as her internal arrangement is concerned, she suffers under a fundamental disadvantage, the arterial system being congested and without symmetry. Beyond the inner circle, however, a gradual plan of renewal has been instituted, and by acquiring and parking all her water fronts, both inland and along the sea, she is gradually extending and perfecting a scheme of development which will insure more and more advantages to her people as the years go by. The city as it shall appear as a unit one hundred years hence is being studied and arranged for, while in the mean time a metropolitan system of units is rapidly crystallizing. More than in any other city, her public domain provides those privileges which offset the enervating effects of congregated life—bathing beaches, bathhouses, recreation grounds, speedways, out-of-door gymnasiums, walks, and drives, not to mention a perfect water supply and numerous ornamental lakes dependent upon it.

THE TECHNICAL ELEMENTS.

TECHNICALLY, the same speaker continued, modern city making involves, first, circulation; second, hygiene, and third, beauty. Hygiene represents the aspect and prospect of the city, its general salubrity, the density of population, the lighting by night and day, a free sweep of air, and lastly, a proper density of construction. A fixed ratio should exist between the voids and solids of all quarters of the city, whether such quarters be one of lofty office buildings or of modest two or three story residences. If a sufficiency of open space is provided, beauty is possible, and here we see the interdependence existing between circulation, hygiene, and beauty.

SMOKE PREVENTION IN CHICAGO.

THE latest crusade on this subject, says the Municipal Journal and Engineer, to be inaugurated is in Chicago. Here an ordinance has been passed which creates a new department, to be known as the Department for the Inspection of Steam Boilers and Steam Plants. Its staff will consist of the city boiler inspector, the city smoke inspector, and a supervising mechanical engineer. This board will make inspections and prosecute all offenders of the ordinances. The provision which promises to be of the greatest benefit is that relating to certain building restrictions. For instance, a permit will not be issued if the plans show that no provision has been made for a smoke prevention device. This applies not only to new buildings, but to those which are to be overhauled. Any violation of this rule will be punishable by a fine of twenty-five dollars per day, imposed upon the person who reconstructs the building without first securing a permit in connection with this feature. There will be no attempt to dictate as to what kind of a smoke prevention device shall be installed, but the owner will be held responsible for the result. Boilers are to be inspected every year, with the exception of low pressure boilers, the fees for inspection being from three to five dollars for boilers and one dollar for tanks and jacket kettles.

A MODEL ENGLISH VILLAGE.

ONE of the most interesting of recent experiments in creating model villages is that of Port Sunlight, near Birkenhead, in England, planned and built by a philanthropic soap manufacturer. The works and their adjoining model village occupy an area of 220 acres of land, which some fifteen years ago consisted only of fields. Of the 220 acres 140 are devoted to the village and the remainder to the factories and offices. The present population of the village is about three thousand persons, who live in blocks of extremely picturesque cottages, each block having from two to seven houses built in early English style, and all varying in design; while each house has its patch of garden or lawn in front and a bathroom among its interior arrangements.

A RESIDENCE AT CONCORD, MASS.

THE residence shown on page 65 has been completed for Robertson James, Esq., at Concord, Mass. The building is of the gambrel roof order and the principal characteristic is the porch at the front, with its balcony over and the swelled roof-line. The underpinning is built of field-stone laid up at random. The building above this underpinning is constructed of wood, and the exterior framework is covered with matched sheathing and then shingles, which are finished in a silvery gray color. The trimmings are painted white. The roof is shingled and treated similar. Dimensions: Front, 69 ft.; side, 44 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The plan shows a long hall, from which the various rooms are entered. This hall is trimmed with oak treated in Flemish style, and has a paneled wainscoting, an attractive nook provided with a seat, an open fireplace, with Roman brick facings, and hearth and a mantel, and an ornamental staircase of good style. The drawing-room is trimmed with white pine, treated with white enamel. The fireplace has white enameled brick facings and hearth and a Colonial mantel. Opposite the fireplace there is a paneled seat with a cluster of windows over the same. The sitting-room is trimmed with cypress and has a window seat and an open fireplace built of Roman brick and provided with mantel. The library is trimmed with white pine and is treated with white enamel. It contains a paneled seat in window and in nook, which also contains an open fireplace built of Roman brick, with a hearth and facings of the same, and a mantel. Bookcases are built in complete. The dining-room is trimmed with oak and treated in Flemish style. The principal feature of this room is the fireplace, built with Roman brick facings and hearth and mantel, and the china closets with leaded glass doors built in on either side. The china closet and pantry are fitted up with shelves, drawers, dressers, complete. The kitchen is provided with all the best appointments, and it contains a lobby large enough to admit ice-box. The second story is trimmed with cypress, and two of the bedrooms are treated with white enamel, while the remainder is finished natural. There are five bedrooms provided with well fitted up closets, sewing-room, linen closet, bathroom on this floor, and two servants' rooms, with hall and stairway to the attic and the basement. The bathroom is wainscoted and the walls above are painted gray green, and fitted with porcelain fixtures and exposed plumbing. Each of the principal rooms has an open fireplace built of Roman brick. There are two bedrooms and a trunk-room on the third floor. The cemented cellar contains a laundry, cold cellar, tool-room, fuel-room, two Ridgeway furnaces, and a Walworth gas machine. Cost, \$12,000 complete. Mr. H. S. Frazer, architect, 8 Exchange Place, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A DWELLING AT LAWRENCE PARK, BRONXVILLE, N. Y.

THE dwelling which is presented on the cover and on page 64 has been erected for Mr. W. V. Lawrence, at Lawrence Park, Bronxville, N. Y. There is a stone foundation under the building which is laid up in a random manner, while the superstructure, of wood, is covered on the exterior framework with matched sheathing and shingles, the latter being stained a soft brown color, while the trimmings are painted white. The roof is covered with shingles and left to weather finish. Dimensions: Front, 30 ft.; side, 25 ft., not including porch. Height of ceilings: Cellar, 8 ft.; first story, 9 ft.; second, 8 ft. The interior throughout is trimmed with white pine and treated with white enamel. The main living-room is the attractive apartment, extending the entire depth of the house, and containing the staircase to the second story, which is of ornamental character. The open fireplace is built of red brick, with hearth and facings of the same, all laid in red mortar, and provided with a neat mantel of Colonial style. The reception-room is a quaint little room, with an open fireplace treated similarly. The dining-room is provided with two china cabinets of Colonial style and with cupboards below and cabinets with glass doors above. The second story contains four large bedrooms and ample closets, dressing-room, etc. The attic contains ample storage space. The cellar, or basement, contains a well fitted up kitchen, pantries, together with a furnace-room and storage. Cost, \$3,500 complete. Mr. William A. Bates, architect, 100 Broadway, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

CENTRAL heating plants are coming into general use wherever possible economically. Binghamton, N. Y., is considering erecting one for the city and county buildings.

New Books

SOME USEFUL TABLES.

SMOLEY'S TABLES, CONTAINING PARALLEL TABLES OF LOGARITHMS AND SQUARES OF FEET, INCHES AND FRACTIONS OF INCHES, EXPRESSED IN DECIMALS OF A FOOT AND ADVANCING BY ONE-THIRTY-SECOND OF AN INCH FROM ZERO TO FIFTY FEET. FOR ENGINEERS, ARCHITECTS, ETC. By Constantine Smoley, C.E., Cleveland, Ohio. Pp. 212. Price, \$3.00.

The general plan and purpose of this book are well expressed in its title page. While this table is published for the first time, there are already in use two tables of squares, one by Buchanan, and one, a more recent work, by Hall, in the latter of which the tables give squares varying by a sixteenth of an inch. The table of logarithms is claimed as the distinctive feature of the present book. This, the author states, opens a wider field of application than the squares alone, and the combination of both tables adds to the value of each. It will be, it is added, of special value to the structural draftsman, as the most frequent problems he has to deal with are handled by means of these tables, with great saving of time and fewer chances of making errors. The book is well printed, and has been published in a form convenient to use. In addition to the tables it contains some pages of explanations and examples showing the method of use.

A BOOK ON VENTILATION.

THE VENTILATION OF THE SCHOOLROOM. By W. J. Baldwin, M. Am. Soc. C. E. Published by the author, 107 West Seventeenth Street, New York. Pp. 46. Price, \$1.00.

This is a small book on an important subject. The subject of ventilation, as the author pertinently remarks, is closely associated with the problems of heating. A room or a building may be well ventilated from a hygienic standpoint, and still be deemed uncomfortable to live in by being over or under heated. If, he adds, it is overheated the unthinking person is apt to say the ventilation is bad, while, as a matter of fact, it may be that only the warming is improperly done; and that is why the questions of warming and ventilating have to be considered together in all cold climates.

After a brief consideration of the injurious elements in the air and some of the methods employed to insure ventilation, the author takes up the question of ceiling ventilation and ceiling or upper side wall registers in a schoolroom, which he regards as very unsettled. In winter time, he points out, it is probably unnecessary to have them, although this does not always satisfy, and for this reason it is customary to place another ventilating register in the same vent flue as the floor register, but near the ceiling. This brings the ceiling outlet too close to the inlet or heat register, resulting in robbing the room of its heat and the "short-circuiting" of the fresh air current when the upper register is open. For this reason it would seem well to have a double set of vent registers and vent flues to each room when possible; the lower vent registers being placed near the floor in the flue group with the heat flues and the upper vent registers near the ceiling in another group remote from the heat. This will provide both floor and ceiling ventilation at the same time. It will also prevent the intensity of draft of the floor "vent" from being interfered with when the upper vent is opened, and it will prevent short-circuiting to a very great extent.

The book is illustrated with colored plans and elevations explaining the positions taken by the author.

A KENTUCKY HORSE FARM.

MR. JAMES R. KEENE's breeding establishment at Castleton, Ky., is one of the most famous in America. Every possible convenience and every possible luxury is lavished on its maintenance. A description of the farm gives some interesting details of stable care. Each of the six stallions occupies a 20-foot stall situated in the stable devoted to these celebrated sires. Three negro grooms devote their entire attention to their care. Each groom having two horses in his charge. The boys take the greatest possible pride in their charges, and can tell their histories from the day they were foaled, as well as the achievements of their sons and daughters, giving weights and dates if necessary. Each of the stallions gets about two hours of exercise every morning over the country pikes, even in the coldest winter weather, and every provision is made in the stallion stable for plenty of fresh air.

A RESIDENCE AT GLENSIDE FARMS, PA.

THE residence which is presented on page 72 was erected for Julius E. Nachod, Esq., at Glenside Farms, Pa. The building is constructed of stone and wood, with Colonial treatment. The underpinning and the first story is built of rock-faced blue stone, laid up in a neat manner. The second story is constructed of wood and the exterior framework is covered with matched sheathing and then shingles, left to weather finish. The roof is also covered with shingles and treated similar. One of the most attractive features of this building is the broad, spacious piazza, which extends across the entire front, and returning at either side. Dimensions: Front, 47 ft. 8 in.; side, 60 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. The plan is arranged with a broad central hall. This hall, and the entire house throughout, except the dining-room, is trimmed with white pine. The hall is treated with white enamel. It contains an ornamental staircase with white enamel turned balusters, treads, and steps, and a mahogany rail and newel. There are paneled seats on either side of the entrance way, and an open fireplace furnished with Tiffany brick facings and hearth, and a mantel of Colonial style. The sitting-room and music-room are treated with white enamel, and each are separated one from the other by double sliding doors. The library and reception-room are treated in a similar manner. The dining-room is trimmed with quartered oak, and it is furnished with paneled wainscoting and ceiling beams. The butler's pantry is wainscoted and fitted up with drawers, dressers, cupboards, and sink. The kitchen is wainscoted and is furnished with dresser, store-pantry, sink, range, etc. The laundry is fitted up complete. The second floor is trimmed with white pine and is treated with white enamel. It contains six bedrooms, eight well-fitted up closets, sewing-room, two bathrooms, and one servants' room. The bathrooms are tiled and furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains guests' rooms and ample storage space. The cemented cellar contains a furnace-room, coal and wood bins, cold storage, etc. Mr. Charles Barton Keen, architect, 1604 Chestnut Street, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT SAN FRANCISCO, CAL.

ONE of the latest additions to the numerous residences now being erected in San Francisco is that of James Madison, Esq., a prominent business man of that city. It is located in Vallejo Street. The situation is a commanding one, upon the side of a precipitous hill sloping toward San Francisco Bay, which lies at its base. The view from the rear of the house is an embracing one, and includes all that is most attractive of sea and land. The slope of the ground on which the residence is located is very steep, and advantage has been taken of this fact in constructing a basement in which the dining-rooms and other appurtenances have been placed. The rear rooms are all fitted with wide bays, and the prospect visible from them adds greatly to their general attractiveness. The style is Italian Renaissance without and within. Perfect harmony in this respect has been attained. The superstructure is of wood, and is surmounted by a roof formed of red terra cotta tiles, and supported by redwood carved beams, which show the tool marks of the carver. A copper gutter, highly ornamental, surrounds the roof, and is sheltered beneath symmetrically placed openings in rilievo stucco-work. The basement contains the elliptical dining-room, which has a twenty-eight foot swelled glass bay window, wide halls, breakfast-room, servants' bath, besides laundry, store and culinary conveniences. The main floor is entered through a porch of chaste and appropriate design, affording access to the reception hall, which is paneled in mahogany to a height of seven feet. The stairway is elaborately carved and of the same material. The parlor, library, and living-rooms are finished in California maple. Only hard wood has been employed throughout. The upper floor, under the roof, is occupied by a ballroom, handsomely decorated, and by bedrooms for servants. Lighting, cooking, and heating by electricity have been installed on the most liberal scale. The conveniences are in evidence on each floor, and are all of the most recent style and effectiveness. The cost of the residence complete is about \$25,000. Mr. J. Francis Dunn, architect, San Francisco.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

CRUDE oil is being successfully used for fuel purposes in the place of coal in many directions. It is employed in locomotives for the generation of steam in stationary boilers, and a steam vessel has recently made a trip across the Pacific Ocean, using oil as fuel.



ALTERATIONS ORDERED BY OWNER.

WHERE an owner orally directed alterations in buildings under construction, which directions were accepted by the contractor, the owner thereby waived the provisions of the contract requiring written evidence thereof to render him liable therefor; and oral evidence was admissible to show such services, and their reasonable value, in an action by the owner on the contractor's bond. *Crowley vs. United States Fidelity and Guaranty Co.*, 69 Pac. Rep. (Wash.) 784.

CONTRACT WITH TENANT.

WHERE, in an action to enforce against the owner of a building a mechanic's lien for the installation of an elevator plant under contract with the owner's tenant, it appears that the lease provided the tenant should put in an elevator plant, such improvement to belong to the lessors on the expiration of the lease, and that the lessors knew of plaintiff's contract with the tenant, there is sufficient evidence from which to infer a consent on the part of the owner to make such improvements, and thereby subject the property to a mechanic's lien under the statute. *New York Elevator Supply and Repair Co. vs. Bremer et al.*, 77 N. Y. Supp. 509.

LABOR LAW—UNSAFE APPLIANCES.

LABOR Law, Section 18, provides that an employer shall not furnish or erect hoists or other mechanical contrivances which are unsafe, unsuitable, or improper, and which are not so constructed, placed, and operated as to give proper protection to life and limb. A derrick was constructed in such a manner that it was necessary, in operating it, to remove a large proportion of its supports, and make its safety depend on the watchfulness and care of a fellow-servant in restraining the swinging of a boom, which, if neglected, would cause a collapse of the whole structure. Evidence offered in behalf of an employee injured by its collapse tended to show affirmatively that such construction was improper. *Held* to make a case for the jury, the concurring negligence of a co-servant in matter of operation furnishing no defense. *Walters vs. George A. Fuller Co.*, 77 N. Y. Supp. 681.

LESSEE AS AGENT OF OWNER.

IN an action by a subcontractor of a lessee to enforce a mechanic's lien under Rev. St. 1899, Section 4203, which gives a lien where the work is done by virtue of a contract with the owner or his agent, etc., evidence considered, and *held* that findings that the lessee was agent of the owner to procure the work, and that plaintiff was entitled to a lien on the fee, were justified. *Winslow Bros. Co. vs. McCully Stone Mason Co. et al.*, 69 S. W. Rep. (Mo.) 304.

MISTAKE IN CONTRACT.

WHERE plaintiff makes an offer to erect a building for a certain amount, and defendant accepts it, there is a consummated and binding agreement, though plaintiff, in adding up the items of his estimates, makes a mistake, for which defendant is not responsible, by which the total is made \$10,000 too small. *Brown vs. Levy*, 69 S. W. Rep. (Tex.) 255.

PARTIAL PERFORMANCE.

WHERE the plaintiff contracted with the tenants of a building to install an elevator plant, the owner consenting to the improvement, and plaintiff tore out an old elevator, as was necessary to install the new one, but failed to complete the new one, owing to failure of the tenants to make payment on the contract price, the property was not subject to a mechanic's lien for the work done and materials furnished for the new elevator. *New York Elevator Supply and Repair Co. vs. Bremer et al.*, 77 N. Y. Supp. 509.

SELLING MATERIALS TO LESSEE.

A MATERIAL man, selling materials to a lessee to erect buildings on the leased property, with knowledge that a ground rent is reserved to the owner, can not subject the ground rent to the payment of his claim. *Baltimore High Grade Brick Co. vs. Amos. et al.*, 52 At. Rep. (Md.) 582.

NOTICE OF LIEN BY ASSIGNEE.

A NOTICE of a mechanic's lien filed by an assignee of a contractor was not binding, as only the original contractor could file such notice. *Zachary et al. vs. Perry et ux.*, 41 S. E. Rep. (N. C.) 533.

A STABLE AT BROOKLINE, MASS.

THE stable at Brookline, Mass., which is illustrated on page 74, was erected for John G. Wright, Esq. It is treated in the old English style with plaster first story and half timber and plaster second story. The plaster work is tinted pearl gray color, while the beams and all exterior woodwork are stained a deep, rich brown color. The roof is covered with shingles and is stained with a moss-green effect. The cellar has a wall of field stone laid up at random, and contains storage room for farming utensils and wagons. There are two carriage rooms, one of which is used for special carriages, while the other affords ample space for the ordinary, everyday carriages; the latter carriage-room has a carriage wash, a large harness-room, fitted with the best modern harness fixtures, and a large room for cleaning harness, provided with sink, counter, and also a man's toilet. The stable contains two box stalls and four single stalls, all provided with the usual ornamental iron fixtures. The floor in stable is laid with brick. The second story contains the coachman's quarters and ample storage room for hay. Messrs. Chapman & Frazer, architects, 8 Exchange Place, Boston, Mass.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A COTTAGE AT NUTLEY, N. J.

THE cottage which is illustrated on page 52 was erected for Mr. William A. Lambert, at Nutley, N. J. The underpinning and balustrade at the piazza is of rock-faced gray stone laid up at random, with brown sand stone quoins at the angles and at the window openings. The remainder of the building is covered on the exterior framework with matched sheathing, and then with shingles stained a soft brown color, while the trimmings and sashes are painted ivory white. The roof is shingled and stained moss green. Dimensions: Front, 28 ft. 6 in.; side, 30 ft. 6 in., exclusive of piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The house is trimmed with yellow pine and finished natural. The hall is provided with an ornamental staircase, and an open fireplace built of red brick, with the facings and a hearth of the same, and a Colonial mantel. The parlor has a bay window, and is separated from the hall and dining-room by archways. The butler's pantry is fitted with drawers, shelves, and cupboards complete. The kitchen is furnished with range, sink, tubs, etc., and all the modern conveniences. The second floor contains four bedrooms and a bathroom, the latter being fitted with porcelain fixtures and exposed plumbing. The attic contains ample storage room. A cemented cellar contains a furnace, coal and wood bins. Cost, \$4,000, complete. Mr. William A. Lambert, architect, 99 Nassau Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A BUNGALOW AT PASADENA, CAL.

THE bungalow illustrated on page 67 was erected for Mrs. Nixon Hopkins and is situated in Pasadena, Cal., and while it might with propriety be built in any section of the country, it would, to some extent, lose its charm in a climate where the vines and plants are not always green, for one of its chief charms is the little open court. The house occupies a lot 55 x 84 feet and faces mountainward—to the north. You enter a large room, 16 x 30 feet—living-room and dining-room in one—warmed by a huge fireplace of arch brick. Opposite the front door, which is Dutch in character, are small paned glass doors, opening into the court. During the summer season the court serves in several capacities—outdoor sitting-room, breakfast-room, and frequently the evening meal is enjoyed in this protected corner. Back of the living-room is a little hall that takes you to a kitchen 10 x 14 feet, entirely furnished in blue and white, and to a bedroom and bath, besides showing you the stairway that leads to a large room above, with a storeroom snuggled under the roof. The house is something of a perversion. The studding was surfaced before being put into place, then came the lath, on the outside of which is eight inch rough siding. Inside it is plastered between the studding, giving the room a paneled effect. The plaster is rough and the natural color. The house is built entirely of California redwood with the exception of floors, which are Oregon pine, third quality, stained to match the woodwork. This *petite maison* is furnished in antiques, and the rugs are rag, principally, with here and there a very old Oriental one. The windows are casements, all but those of the kitchen opening on the court, which would be in the way if they swung. The house was not an economical one for its size, but it boasts of originality and home comforts. It cost \$2,500 complete. Mr. J. J. Blick, architect, Pasadena, Cal.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

FULL-SIZED MODEL OF THE NEW YORK PUBLIC LIBRARY.

A NOVEL, if not unprecedented, idea in building, so far as New York is concerned at least, has been carried out by Messrs. Carrère & Hastings, the architects of the new building now being erected in Bryant Park for the New York Public Library. This is the erection of a portion of the main front in plaster, in the full size of the original. While architects are accustomed to execute the most elaborate work from drawings, models are employed for sculptural and ornamental details. It is seldom, however, that so large and costly a model is made as in this case, when an entire bay, with windows, enclosing columns and roof balustrade, have been built up in full size. The painstaking care being taken in the erection of this building, which promises to be one of the most monumental and important in New York, is well exemplified by the erection of this model.

Just behind it, in the illustration, may be seen one of the towers of scaffolding erected to support the derricks which will be used to lift the building materials into place. Some six or seven of these great structures have already been erected, and give a characteristic and interesting aspect to the site so long filled by the forbidding walls of the old reservoir.

The illustration was made from a photograph taken expressly for the BUILDING MONTHLY.

THE CAMPANILE OF SAN MARCO, AND THE DECAY OF ART MONUMENTS IN VENICE.

By F. W. PARSONS.

SEVERAL interesting questions have arisen as the outcome of the collapse of the Campanile of San Marco, and a study of the ruins of the giant tower of Italy has upset all theories as to its method of construction.

New information on these discussions have been kindly furnished to the writer by Commendatore Giacomo Boni, a Venetian known all over the world for his remarkable work in the Roman Forum, and now in charge of the Regional Office for the Preservation of Venetian Monuments. He has directed the clearing away of the ruins of the Campanile of San Marco and the Loggetta of Sansovino.

The removal of the ruins will now be immediately followed by a very thorough examination of the condition of the foundation not only of the bell-tower, but also of the adjacent buildings of the wonderful group that has so long been the delight of travelers in Italy.

The disaster of July 14, 1902, which deeply stirred all Italians and startled the entire world of architecture and art, is likely, after all, to prove a blessing in disguise. The collapse of the Campanile of San Marco will undoubtedly save many of the rarest artistic monuments of Italy from official neglect.

Exaggerated reports of the general disintegration and decay of old Venice have spread over the world, and have found a ready echo in the daily press of the United States. After an event so unexpected by Americans, this is not unnatural, especially as prophets of future disaster are to be found among Italians.

Their forebodings certainly gain considerable force from the bitter experience of the one man who ruined his career by his efforts to awaken the authorities to a sense of the precarious state of the Campanile of San Marco. As far back as 1878, the Italian architect Luigi Vendrasco foresaw its collapse, and made persistent attempts to prevent it.

While directing some work in the Palace of the Doges, he discovered the imminence of the danger. It was not part of his duty to concern himself with the Campanile, but he did so, and successively warned the Syndic (or Mayor), the Prefect, and various commissions officially charged with everything of the kind. But Vendrasco's reports were not even opened! Then he appealed to Queen Margherita, and even wrote to Queen Victoria. For this last act he received an official snub from the Italian Minister, who requested him to remember that he was an Italian and not an Englishman. When finally the officials threatened to tear down the old shops on the Ponte Vecchio, a society was formed in England to protect the art monuments of Florence. Sir Edward Poynter, of the Royal Academy, was its first president.

Signor Vendrasco continued to disturb the complacent optimism of governmental confidence. The troublesome architect was transferred to Cagliari, presumably to stop his persistent efforts to save the Campanile. Being of advanced years, he was unable to report for duty at his new post at the time designated, and was accordingly dismissed.

The ill-used but brave old man remained in Venice, a close observer of official neglect and dilatoriness, if not actual incompetence. When the awful cut was made in the east wall of the Campanile, in repairing the

roof of the loggetta, Signor Vendrasco saw in that the death blow of the Campanile and others in authority, then sounded a note of alarm. The cut reopened the old crack of 1745 (caused by lightning), and great concern was felt by several of the official engineers and architects. Yet on the very day the Campanile collapsed the leading paper of Venice said of the reopening of the old fissure:

"Confronted by this condition of things, the technicians, while excluding absolutely the peril of a collapse, felt the scarcity of means that science could offer them to the end of radically curing the evil."

On the same day the far-seeing, but unheeded Vendrasco wrote, "The Campanile has no more than some hours," and the ink was scarcely dry on his paper when the Venetian tower fell, crushing in the north end of the former library, but almost miraculously sparing the great church and the other gems of architecture and art that constitute the greatest glory of Venice.

Then the saddened prophet wrote: "Persecuted for many years, I should have preferred death in her lap (from my many bitternesses) if only my Venice had been spared this enormous misfortune."

The Campanile and its fate should not be regarded as furnishing arguments for prognostications of ap-



FULL-SIZED MODEL OF THE NEW YORK PUBLIC LIBRARY.

proaching decay and ruin of other Venetian monuments. The only feature common to both the Campanile and other buildings of the Piazza San Marco is the character and condition of the foundation, or of the underground strata hereabouts.

The only investigation recorded in modern times was that undertaken in 1885, at the instigation of Mr. C. H. Blackall, of Boston. This enterprising American interested himself in the character and condition of the foundation of the Campanile of San Marco, and obtained official consent for the examination that was then made by the same Signor (now Commendatore) Boni, who has lately cleared the ruins of the famous bell-tower, and who will reconstruct it on the same spot.

In his reports of the investigation of 1885, Signor Boni said:

"At forty centimeters below the present street pavement a pavement of brick of the shops at one time built up around the Campanile is encountered; at seventy-two centimeters the old pavement of brick, whose existence was already verified so many times, in so many parts of the Piazza and Piazzetta, is found."

This reference is to the pavement of herringbone brick (opus speccatum) shown in Bellini's picture of the Procession of the Holy Cross, painted about A. D. 1500, and showing the east end of the Piazza San Marco as it was in his day.

Boni continued: "Descending with the investigation, it is to be noted that this pavement is situated about eleven centimeters above the level to which the water rises at high tide. Under this pavement a ground

surface of set design is seen (terrena di riporto), composed of small pieces of brick and stone mixed with earth (rovinaccio). At two meters fifty centimeters under the ground level of broken fragments (rovinaccio) just described, a uniform stratum of black clay is found."

Then follow details of the foundation of the Campanile of San Marco. Briefly summarized, they describe a palisade of posts or piles, with but little space between them, and driven into a bed of solid clay that covers to a wide extent the alluvial sands of the Venetian estuary. These posts, or piles, have a thickness (in metric measure) of 0.26. Upon all except one row of piles there rested a flooring or raft (zatterone), of double fold, made of heavy oaken planks laid crosswise. Upon this wooden flooring, or platform, were built up seven courses of stone that constituted the base of the Campanile. The seventh, or lower, course was much thicker than the others, and had more of a slope. Upon these seven courses of stone was laid the visible plinth of five small stone footings, or offsets, two of which were below the level of the present pavement of the Piazza.

Several features of this foundation are worthy of special notice. There is nothing in its character or construction that of itself determines the date of its origin, yet it bears evidences of an antiquity relatively great. Although ancient chroniclers are conflicting, the general consensus of opinion attributes the commencement of the Campanile to Doge Pietro Trono (or Tribuno), who was elected in A. D. 888, and died A. D. 912. Work on the tower was resumed in 1178 and completed in 1329. Lightning damaged the wooden belfry, but it was replaced by one of stone, and in 1513 the pinnacle was surmounted by the angel of wood, copper-gilded, that, on July 14, 1902, made a now historic flight, landing, with broken wings, upon the main entrance of the great cathedral of St. Mark.

The Campanile rose to a height of nearly one hundred meters, yet the total distance from the heads of the piles to the summit of the stone footings from which commenced the brick wall of the Campanile was little more than five meters, scarcely one-twentieth of the height of the tower.

The extraordinary hardness of the bed of clay upon which the Campanile was placed explains, to a certain extent, how, until the collapse, that great pile suffered but an almost imperceptible inclination, in spite of the absence of a true and proper foundation, in the ordinary significance of the term.

The hardness of this clayey bed, further strengthened and solidified by the palisade of posts, is also due to the pressing together of these piles against the clay and to the pressure from above to which all this lowest foundation was subjected for perhaps ten centuries, a pressure that was continuous, enormous, and ever-increasing. Signor Boni estimated it in 1885 at ten millions of kilograms.

The foundation of the Campanile of San Marco belongs to the type of those with restricted area. Commendatore Boni stated to the writer that this foundation covers an area of about two hundred square feet, and the examination he is now making, or about to make, will determine whether it is advisable to extend the area of foundation. If an extension is considered necessary, he will enlarge it to four hundred square feet before reconstructing the Campanile.

The increase in height of the Campanile of San Marco, in its various stages of development, was carried out independently of any thought or calculation of the builders of its foundation. The power of endurance furnished by this bed of clay, strengthened by its palisade of piles, was a happy result that could hardly have been anticipated.

In the United States attempts have been made to mark a parallel between the case of the Campanile and conditions prevailing in some American cities, St. Louis for example, where, under the major part of the city, is reached a thick bed of blue clay, beneath which is a stratum of soft earth. In the case of some buildings of St. Louis, piles have been driven entirely through the hard blue clay into the soft earth. This was the case with the Post Office, where it was found that the only strength of the foundation was derived from the lateral pressure of the piles against the blue clay through which they passed.

It is asked: "Will the St. Louis Post Office eventually go the way of the Venetian Campanile?" It is also declared that "the conditions are identical." This last statement is erroneous, and the people of St. Louis and any American city where such conditions prevail can comfort themselves by remembering that the cause of the collapse of the Campanile of San Marco was not in the foundation, but in the tower itself.

In August last, Commendatore Boni submitted his report to the government on the causes of this collapse, and he has not commenced his examination of the foundation until this autumn, many weeks later. The

far-seeing Vendrasco, who, in 1878, predicted the downfall of the Campanile, probably never saw the foundation.

In 1745, a stroke of lightning opened a fissure or crack in the wall of the Campanile. Repairs upon it were entrusted to Architects Poleni and Zendrini, who bound up the injured parts with a new lining of bricks. But these repairs were defective, for the new lining failed to unite itself with the old part, and telluric movements and electric discharges continually disturbed the injured section of the Campanile. Twenty years ago Signor Saccardo, an Italian engineer, found it necessary on that side of the tower to encircle with iron one pilaster of the eleventh grade of the ascending incline.

Another element of weakness in the Campanile was the complete deterioration of all the mortar in the tower. Much of this mortar had so far crumbled away as to appear in the ruins like a fine white powder or dust, and it had long lost all power of cohesion. A natural result was that the Campanile collapsed rather than fell, and it was pulverized rather than broken in its collapse. This is a cause of the apparent smallness of the heap of ruins, little, indeed, in relation to the immensity of the highest bell-tower in the world.

It is a probable cause also of the salvation of the adjacent church of St. Mark from vast injury or ruin. Cardinal Sarto, Patriarch of Venice, believed this wonderful preservation due to divine interposition, and a grand triduum of thanksgiving was celebrated in St. Mark's.

If the mortar of the Campanile had crumbled and become worthless, vast numbers of the bricks were in good condition, and some showed astonishing hardness. Commendatore Boni showed the writer several that had taken a polish like red marble. He also displayed thirteen different imprints or marks upon the bricks. One was an imperial stamp of the reign of Antoninus Pius. Other bricks showed prints of the feet of domestic animals and fowls that had walked upon them before they were sent to the furnace. These bricks ranged in age from the first century B.C. down to mediaeval times. The older bricks had been taken from Roman edifices at Aquileia and elsewhere for use in building the Campanile.

Almost, if not quite, all architects, students, and critics who have written of the fall of the Campanile have described the tower as constituted of an enclosure of interior walling, surrounded by an outer or exterior wall, the space between being filled up somewhat after the Roman style of a double wall. It was argued that, though this lofty wall had an apparent density of one meter eighty centimeters, it was in reality weak, because of veritable walling it had but the external fascia of a density of about sixty centimeters, and that the interior wall or enclosure was thinner still.

These views are, however, quite incorrect. Commendatore Boni has assured the writer that "the Campanile of San Marco was one continuous brick wall, with here and there a stone introduced, particularly at the angles, and especially at the time of the injury by lightning" (in 1745).

It was not constructed in the Roman style of two walls, with an intervening space filled up in the manner indicated above. These assertions of Commendatore Boni are fully sustained by his assistant, Signor Moresco, who declares that "the wall of the Campanile constituted one continuous mass." Both of these gentlemen are prepared to support their position with every kind of proof, having had the advantage of a daily examination of the ruins, whose removal they have directed.

So much for the static conditions of the Campanile, the characters and mode of its construction, and the materials of which it was composed, in the light of the best information obtainable on the spot, bearing the weight of official authority and world-wide celebrity.

Though doomed anyhow, largely through earlier official neglect of warnings received, the immediate cause of the collapse of the giant tower of Venice was the bungling execution of labors undertaken for the repair of the roof of the beautiful Loggetta of Sansovino, on the east side of the Campanile. Here a deep cut was made in the tower wall by workmen who knew nothing of the structure of the Campanile wall, nor of the radical restoration of 1745. A cut was thus made into the base of the part of modern construction, and so meeting the ancient, damaged wall, which presented no consistency whatever.

A natural result was the reopening of the old fissure, which spread with alarming rapidity. This condition of things was brought to the notice of the responsible authorities, but even then several days were consumed in bureaucratic circumlocution, and visitors were allowed to ascend the Campanile until about thirty-six hours before it collapsed, some say even later.

No adequate protection was given the public on the piazza until less than a half hour before the crash. One official ascended to the belfry five hours before the downfall, and workmen, scaling a ladder resting

against the tower wall, saw the yawning gap spread over the walls. In a few moments after they had taken to their heels, the ruins were piled many feet high where the ladder had stood.

A new Campanile will replace the old on the Piazza San Marco. Subscriptions for it are pouring in from all over the world. The American list is too long to quote. England, however, leads the world outside of Italy in the matter of subscriptions. Commendatore Boni says work on the new Campanile will be commenced in the spring, as there is enough money in hand to justify an early commencement of a probable work of years.

That the new bell-tower will not have the same associations with the grand historic past of Venice goes without saying. Old traditions of song and story will not cling around it. It will not be the Campanile upon which was practised the curious punishment of the "Cheba," consisting of incarceration in an iron-bound wooden cage suspended outside the center of the tower. Herein blasphemous offenders were confined night and day, their food being let down to them from above by means of a cord.

It will not be the tower into which the reckless Count Wimpfen, an Australian officer, rode his horse, ascending well up on horseback, the grade being gradual, a feat wrongly attribute to Napoleon I.

The new Loggetta, replacing the wrecked masterpiece of Sansovino, will have more original associations, since all available material of the old Loggetta will be used in the new structure, and such remains as are unfit for this purpose will be used to strengthen the foundation.

What may be styled the tombstone of the old Campanile will be erected on an artificial hill of the public gardens of Venice, surrounded by trees. This will be a pyramid ten meters high, formed of perfect bricks of the old Campanile. This is to constitute a memorial for future generations of the great collapse of July 14, 1902. Imperfect bricks and similar fragments have been bought by a speculator, who will sell them as souvenirs.

VENICE, ITALY.

ORNAMENTAL BRICK WORK.

COLOR plays an important part in the architectural effect of brick work, but it is not as yet as much employed by architects as it should be. Colored mortars might also, if generally used, present pleasing features. Enameled and glazed bricks, while expensive, have, when judiciously used in exterior work, delightful effects. The use of diapers accented more or less in color was suggested to builders of the Renaissance period by the patterns formed, and various colors presented by bricks of the different bond when laid in an orderly manner. The field for decoration offered by patterns formed by using a regular bond is very ample. There are many late examples of an unwise use of colored brick in decorative diapers, in strong contrast to the simple design and effective color results of earlier work. Not all architects nor all painters can use color wisely. Hence great care must be taken in its use in brick work. There are, however, architects of excellent taste and judgment in the matter of color effects in brick work which in such hands may produce very happy contrasts. All shades of colored brick and excellent terracottas are now made in this country.

England and Holland are rich in examples of hand rubbed or curved for brick moldings. Brick for this work is made of very fine clay well mixed with sand. It is very even in texture and so soft that a mason may cut it readily with a small saw or chisel, grind it down on a wheel, or rub it off with a mold. Many houses profusely ornamented in this sort of brick work are to be seen throughout Belgium and Holland. England is rich in venerable brick edifices of the Queen Anne and Gregorian periods, lavishly decorated in brick color effects.

Molded pressed bricks enable us here in America to reach good results and lasting ones, but our molded brick lacks the crispness and texture of the rubbed moldings. Molded pressed bricks can, besides the matter of color, be used to advantage in the formation of panels and ornamental work generally. Cornices, belt courses, and copings are now usually constructed of molded bricks, but sometimes formed of square bricks.

Discoloring of a very objectionable character frequently occurs in brick work. It takes the form of a white efflorescence, appearing on brick buildings soon after their erection, but sometimes later on. This efflorescence is usually noticeable after heavy rains. It is sulphate of magnesia and is sometimes called "saltpeter" and again "whitewash." Clay containing sulphate of magnesia should be avoided by the brick-maker. One or more coats of paint often prevent efflorescence. The wall should be perfectly dry when painted. It has in some cases been found that a cure can be effected by washing off the substance with a brush dipped in muriatic acid. Brushing it in the ordinary way will also remove the discoloration.



The following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY by MUNN & Co., Solicitors of American and foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents. If exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

PROCESS OF SETTING TILES. J. H. Munroe, Newark, N. J. August 5	706,474
MEANS FOR SETTING MOSAICS. T. Alcan, New York, N. Y. August 12	706,874
TILE. F. R. Lawrence, Brooklyn, N. Y. August 19	707,125
COMPOSITION FOR MAKING STONES OR MORTAR. J. Loewenthal, Magdeburg, Germany, August 19	707,129
SLAB OR TILE FOR BUILDING PURPOSES. N. Poulson, Brooklyn, N. Y. August 26	707,635
COMBINED BRICK AND TILE FOR WALLS. D. W. Anderson, Richmond, Va. August 26	707,815
ARTIFICIAL STONE. F. Boas, St. Hyacinthe, Canada, August 26	707,898

CARPENTRY.

FRAME FOR DOORS OR WINDOWS. G. Carr, Carrville, Iowa, August 5	706,157
WINDOW SHUTTER. J. G. Busch, Alma, Wis. August 5	706,217
FLOOR LAYING AND NAILING MACHINE. J. C. Daigneault, Worcester, Mass. August 12	706,805
WINDOW SASH. E. Heroux, Yamachick, Canada, August 19	707,106
SKYLIGHT. E. J. Hulse, Washington, D. C. August 19	707,419
WINDOW. H. Vettel, Newark, N. J. August 26	707,808
FORCING FRAME OR LIKE SASH FOR WINDOWS. G. Knochenhauer, Schaala, Germany, August 26	707,932

CONSTRUCTION.

JOINT FOR PILASTERS, PILLARS, PORTS, ETC. W. Kopp, Louisville, Ky. August 5	706,070
MASONRY WALL AND BRICKS FOR SAME. A. H. Moses, St. Louis, Mo. August 19	707,444
BOX OR BUILDING MATERIAL. O. Neutwig, Neustadt, Germany, August 19	707,446
EAVES TROUGH HANGER. H. Pope, Hollidaysburg, Pa. August 26	707,941

ELEVATORS.

ELEVATOR STOP. E. C. Edwards, Emporia, Kans. August 12	706,644
ELEVATOR OPERATING MECHANISM. W. W. Hubbard, Manchester, N. H. August 12	706,826
ELECTRIC SIGNAL FOR ELEVATORS. L. K. Curlett, Chicago, Ill. August 19	707,305
SAFETY DEVICE FOR ELEVATORS. J. W. Fleming, Philadelphia, Pa. August 19	707,311
SAFETY STOP FOR ELEVATORS. W. Fehler, Mountainville, Pa. August 19	707,407
ELEVATOR. E. R. Gill, New York, N. Y. August 26	707,839

FIREPROOFING AND FIRE EXTINGUISHMENT.

FIREPROOF FLOOR CONSTRUCTION. Simpson & Shoemaker, Jersey City, N. J. August 5	706,347
FIREPROOF PARTITION STRUCTURE. Simpson & Shoemaker, Jersey City, N. J. August 5	706,348
FIREPROOF CEILING AND FLOOR. S. G. Brinkman, New York, N. Y. August 19	707,201

HARDWARE.

SASH BALANCE. J. Barrow, Windfall, Ind. August 5	706,008
WINDOW BRACE AND FASTENER. O. J. Jenks, Wausau, Wis. August 5	706,065
WINDOW FASTENER. W. W. Pottes, Pawtucket, R. I. August 12	706,595
SASH LOCK. V. R. McBride, Stillwater, Okla. August 12	706,845
COMBINED DOOR STOP AND CATCH. J. Daniel, Los Angeles, Cal. August 12	706,904
SASH LOCK. N. H. Hutton, Chicago, Ill. August 12	706,947
WINDOW LOCKING DEVICE. J. Wanless, Bay City, Mich. August 12	707,039
SASH WEIGHT. G. A. Beckwith, Waterford, Conn. August 19	707,196
LOCK. H. Bryda, Woonsocket, R. I. August 26	707,757
SASH LOCK. E. A. Patterson, Dunbar, Neb. August 26	707,940

HEATING AND VENTILATION.

HEATING FURNACE. F. H. Daniels, Worcester, Mass. August 5	706,032
RADIATOR ATTACHMENT. G. W. Chipley, Chicago, Ill. August 5	706,159
WARM AIR RADIATOR. J. Clements, East Chicago, Ill. August 5	706,161
HEAT REGULATOR FOR FIREPLACES. R. N. Johnson, Bremerton, Wash. August 5	706,182
COOLING AND VENTILATING SYSTEM. J. E. Lawrence, Chicago, Ill. August 5	706,327
WINDOW VENTILATOR. D. O. Davis, Atlanta, Ga. August 12	706,905
HEATING AND VENTILATING APPARATUS. J. Kallgren, New Haven, Conn. August 12	706,954
HEATING APPARATUS. I. D. Smead, Cincinnati, Ohio, August 19	707,364
HEATER, RADIATOR, OR STOVE. T. P. Keenan, Brooklyn, N. Y. August 26	707,970

PLUMBING.

MECHANISM FOR TEMPORARILY LOCKING WATER CLOSET BOWLS OR WASHBASINS. E. Woodruff, Chicago, Ill. August 12	706,869
WATER CLOSET BOWL. P. J. McGuire, Blairsville, Pa. August 12	706,990

TOOLS.

PLANE. J. A. Traut, New Britain, Conn. August 12	706,704
CARPENTERS' TOOL. M. F. Doyle, Scranton, Pa. August 19	707,307
PLANE. A. W. Stanley, New Britain, Conn. August 19	707,365
COMBINED PLUMB BOB, LEVEL, ETC. D. L. McDermott, Carlisle, Pa. August 19	707,518

MISCELLANEOUS.

PAINT. J. C. Shaw et al., Bessemer, Ala. August 5	706,119
MORTAR COMPOSITION. E. K. Welch, Philadelphia, Pa. August 5	706,138

Publishers' Department

METAL ROOFING.

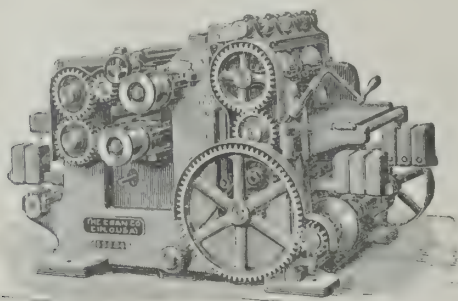
THE Cortright Company of Philadelphia makes and lays slates and shingles which will not crack, rot and buckle. This is an improvement that gives to roofing the distinction of being a prominent feature in advancing building proficiency. The company makes a specialty of roofing, and has been constantly experimenting to overcome the excesses of contraction and expansion, and to reach absolute storm-proof tightness. The Cortright roofing is made in metal slates or Victoria shingles. A patent side-lock which permits the slates or shingles to give as the weather demands, without affording the slightest opening on the side for water, snow, or sleet, and a step-like arrangement on the upper part of the plate that prevents water from trickling through at the top or bottom, are features which in combination with the right kind of material make the reputation of this excellent roofing. Besides the metal slates and Victoria shingles for the body of the roof, the company makes a ridge coping, which is a covering that thoroughly protects the apex of a roof and gives it a finished appearance. The Cortright patent valley is made so that shingles or slates will lock over the folds, to give perfect protection against water washing up or under slates or shingles at the sides of the valley. The allowance for expansion and contraction is ample in the folds. Two folds are formed on each side, so as to give a double security against storms of all kinds. The main office and factory of the Cortright Company are at 50 North Twenty-third Street, Philadelphia, Pa., and the western office is at 134 Van Buren Street, Chicago, Ill. A booklet with information on metal roofing may be had at either address.

NEW DOUBLE CYLINDER PLANER.

HERE is a new and improved double cylinder planer patented December 19, 1899, and February 6, 1900, which is especially adapted for general surfacing and box factory work. It contains many features and advantages, among which we call attention to the following:

1. It has a very solid frame, and will work 24, 27, and 30 inches wide and 8 inches thick.
2. It has power feed with broken rolls, either in two or four sections, and each section is center-geared.
3. The lower head comes immediately after the upper, and it will work short as well as long stuff with equal facility.
4. It is simple to operate, and powerful in all its parts, making it one of the best general double cylinder surfacers made.

The makers of this machine, J. A. Fay & Egan Co., of Nos. 209 to 229 West Front Street, Cincinnati, Ohio, will



NEW No. 18 DOUBLE CYLINDER SURFACER.

be pleased to furnish any of our readers who may be interested and will write them, with prices and full particulars, and will also send their large new illustrated catalogue, showing this and every other machine they make, free.

ROOFING TIN.

UNDER sea air and other trying conditions American tin plate is now perfectly adapted to hold its pliability, finish, and durability. The superiority of our standard terne plates, as well as the rapid growth of the industry, is the result of American ingenuity adopting and improving on the best methods of Wales and other European countries. In competition with the world, at the Paris Exposition of 1900, the American Tin Plate Company's roofing plates received from the International Board of Judges the highest award, this, too, when the industry was not more than ten years old. To make a roofing that will withstand the deteriorating influences of sea air requires the use of carefully selected bars from which to roll the black plates. After the sheets are rolled to a standard thickness they are assorted, so that all defective sheets are

culled out. The remaining perfect black plates are given the first dip into the bath of pure tin and new lead and again assorted, and only the perfect plates are put on the market. The entire tinning process is effected by skilled hand labor without the use of rolls or acid, and the fine qualities of the plates are obtained because they are hand dipped and carry a heavier coating of tin and lead than can be applied by mechanical means. Terne is made of such well tested and excellent materials that the owner of a roof laid with its plates may enjoy the satisfaction of knowing that there is no danger from live sparks, galvanic action, breaks, or disintegrations, that there is a fair protection from lightning, and that insurance rates are lessened. A roof constructed of M F tin, manufactured by the American Tin Plate Company, to be perfectly serviceable requires good workmanship and good materials, and for this reason suggestions to roofers and much valuable information about the making of standard grades of terne may be had from the catalogue or booklet issued by the company and sent to any applicant. In addition to the M F roofing tin, the company manufactures a number of brands, chief of which are the Norristown New Method and the U. S. Eagle New Method, and other high grade goods, such as the American Terne, American Extra, American Special, and American Old Style, from 1A to 5A, each A signifying an additional amount of coating. The fundamental principle of coating used in M F, which has stood the test of half a century, combined with the New Method finishing process, produces the acme of excellence. The U. S. Eagle brand is made so that it fills strictly all the prescribed requirements of the United States Government, from the best quality soft steel. Buildings of all kinds, in every hamlet, town, and city of this country, are roofed with these materials. Great cotton mills, vast machine shops, enormous grain elevators, famous railway sheds and shops, many municipal structures and residences and business houses are protected with M F tin. Many were roofed fifty years ago and have required but little repair. The address of the company is Battery Park Building, New York City, and a booklet may be obtained from W. C. Cronmeyer, Agent, 1211 Carnegie Building, Pittsburg, Pa.

POWER CIRCULAR SAW.

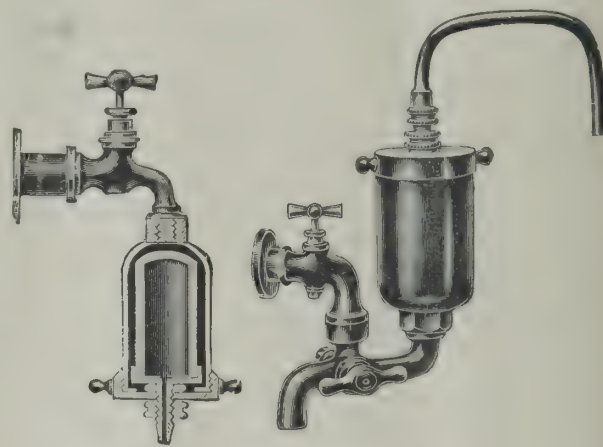
J. M. MARSTON & Co., of Boston, Mass., make a 24-inch power band saw with countershaft attached. It is made with special reference to the demand for a good, well constructed, and accurate machine, that will not occupy too large an amount of floor space, but will have power and capacity for all kinds of band-sawing, such as is required in carpenter shops, cabinet shops, and small job shops, and it is especially adapted to be run by electric motor. The frame is cast in one piece, the legs are securely bolted to the same, and the countershaft is made a part of the legs at the back of the machine. The shafts are of steel, lathe-turned, large, and of good length, and run in iron boxes lined with best Babbitt metal; the upper band-wheel bearing slides on accurately planed, gibbed ways, and is adjustable up and down by means of a hand wheel, and is also adjustable to bring the band wheels into line. The saw-pulleys are 24 inches in diameter, 1 3/8 inches face, and covered with endless pure rubber bands strengthened with canvas. A shipper is furnished with each machine. The guides are both above and below the table. The top guide is a roller guide wheel, made of hardened steel, to receive the thrust of the saw, and the distance between the table and the upper guide is 7 inches. The table is 24 x 24 inches, made of kiln-dried hardwood, and has an extra table, covering the lower saw pulley. Its height from the floor is 3 feet 4 inches; floor space occupied, about 2 feet by 4 1/2 feet; net weight, 340 pounds. A countershaft is furnished on each machine, with two pulleys 9 inches and 10 inches in diameter; or the machine may be had without the shaft. Band saw blades fitted for these machines and set and filed, brazing tongs, brazing clamps, Indian tanned belt, etc., are among the supplies of J. M. Marston & Co., 199 Ruggles Street, Boston, Mass.

TILE MAKING.

IN Mr. William De Morgan's opinion, tiles made on the dry system—i. e., of clay ground dry, and compressed into shape by hydraulic pressure—are unable to withstand the action of frost when damp. The particles are in such a juxtaposition that the tile is soon saturated with moisture, and when this crystallizes there is no room for the expansion of the water, and consequently the ice breaks up the tile; whereas, by the wet system, when the clay dust is mixed with water and pugged and variously handled before it is dry enough to go into the oven, the disposition of the particles of clay allows for some expansion of the moisture that has soaked in, which enables the ice to be formed without doing damage to the tile or its cement backing.

FILTERS.

FILTERS made by the Berkefeld Filter Co. are adapted for house, factory, and laboratory use, and have the distinction of being used for field purposes by the armies of the United States, England, Germany, and Austria. Testimonials from hygienic journals, eminent scientists, and practical operators of the device show its advantages. It gives a continuous flow of perfectly pure water in small or large quantities according to pressure, the filtered liquid is free from germs and solid particles, each filter cylinder can be thoroughly sterilized by being boiled in water for one hour, and after each cleaning the cylinder will regain the same rapidity of filtration as before. It is constructed so that all the parts are detachable to admit of frequent cleaning and sterilizing. The filtering cylinder is made of infusorial earth found in the well-known Kieselguhr mines in Hanover, Germany, and the microscopic construction of this earth renders it peculiarly suitable for the purpose of filtration. The company make house filters of many styles and sizes for use with various pressures; bar and restaurant filters; medical and laboratory and experimental filters for sterilizing liquids and filtering beef-tea and infusions containing bacteria; the portable army filter, an absolute necessity for military use, for travelers in tropical climates, hunting parties, bicyclists, and people living in country places where no direct pressure from water-works can be obtained; the military campaign filter on wheels, called the transportable water wagon, and large supply filters. The little army filter No. 3 can be placed in a bucket of unfiltered water or in a stream, and by the use of a pump pure water runs out of the small pipe, at the top, one quart per minute, while the large supply apparatus made of cast iron, enameled inside and especially adapted for manufacturing purposes, for mineral water makers, brewers, and artificial ice manufacturers, hotels, clubs, hospitals, etc., has a capacity per minute of from one and one-half to fifteen and one-half gallons. The company also makes a very useful attachment for basin faucets, making it possible to have a filter and a shampoo in any washstand. It can be attached and removed at will, and no plumbing is necessary. Amongst the discoveries in sanitary science which have been the most pregnant with good results is certainly the finding of the fact that many of the most widely diffused of the zymotic diseases are commonly transmitted by their germs gaining access to and polluting the water, and so numerous are the chances of contamination that a preventive which will keep a family in safety should be welcome as a mechanical supplement to the work of the bacteriologist. The address of the Berkefeld Filter Company is 4 Cedar Street, New York City.



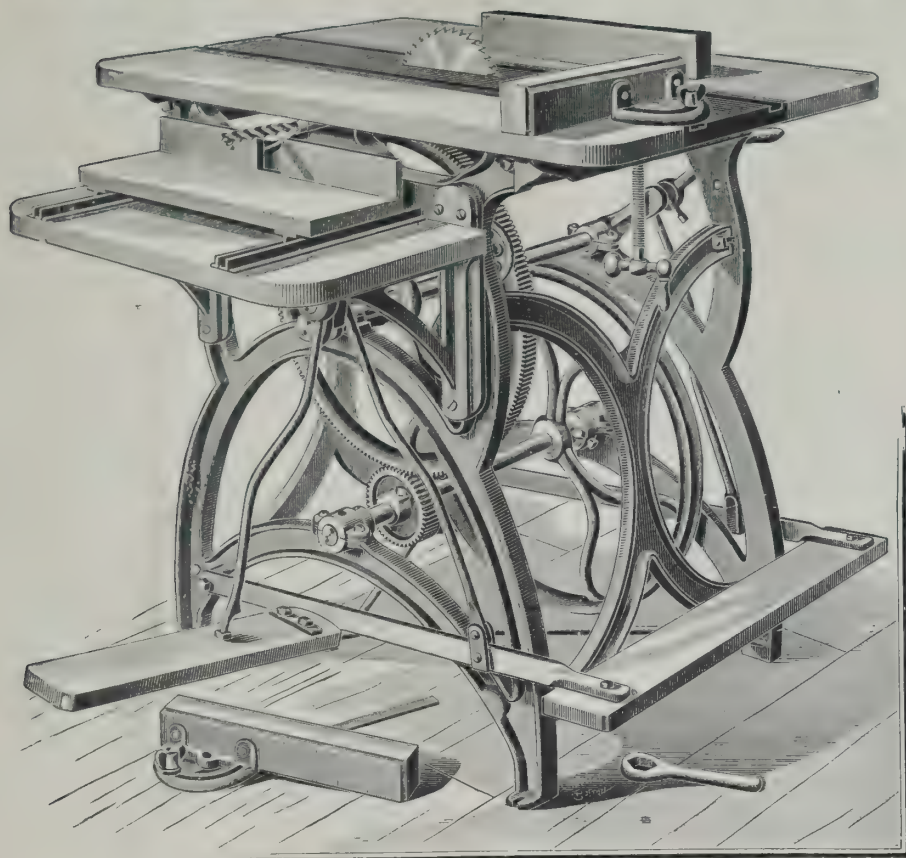
HOUSE FILTER.

culiarly suitable for the purpose of filtration. The company make house filters of many styles and sizes for use with various pressures; bar and restaurant filters; medical and laboratory and experimental filters for sterilizing liquids and filtering beef-tea and infusions containing bacteria; the portable army filter, an absolute necessity for military use, for travelers in tropical climates, hunting parties, bicyclists, and people living in country places where no direct pressure from water-works can be obtained; the military campaign filter on wheels, called the transportable water wagon, and large supply filters. The little army filter No. 3 can be placed in a bucket of unfiltered water or in a stream, and by the use of a pump pure water runs out of the small pipe, at the top, one quart per minute, while the large supply apparatus made of cast iron, enameled inside and especially adapted for manufacturing purposes, for mineral water makers, brewers, and artificial ice manufacturers, hotels, clubs, hospitals, etc., has a capacity per minute of from one and one-half to fifteen and one-half gallons. The company also makes a very useful attachment for basin faucets, making it possible to have a filter and a shampoo in any washstand. It can be attached and removed at will, and no plumbing is necessary. Amongst the discoveries in sanitary science which have been the most pregnant with good results is certainly the finding of the fact that many of the most widely diffused of the zymotic diseases are commonly transmitted by their germs gaining access to and polluting the water, and so numerous are the chances of contamination that a preventive which will keep a family in safety should be welcome as a mechanical supplement to the work of the bacteriologist. The address of the Berkefeld Filter Company is 4 Cedar Street, New York City.

INFORMATION ON HEATING.

WE have received from the Herendeen Manufacturing Company of Geneva, New York, an advance copy of a booklet entitled "Warmth—in Ways Diverse." Its pages are well illustrated, and the information in reference to the various methods of warming houses, from the open log fire and stove to the modern steam and hot-water systems, is practical and complete. The little pamphlet of facts and figures, with its illuminated cover and clean cuts picturing the warming methods of early days down to the nearer perfect apparatus of the present, will be mailed free, on application to the company at Geneva. At the works the Furman boilers and radiators are made, among which may be mentioned the compact and powerful Furman new sectional hot-water boiler, the Furman steam boiler, made in over fifty sizes, the Furman portable steam boiler, the Furman brick-set steam boiler (for large buildings), the Furman brick-set water boiler, and the Furman, Jr., water and steam boilers. Boilers of this name are known to be of the highest standard, and as economical in heat producing as any combination of skill and capital has devised. They are made in a great variety of styles and sizes, and are suited to all the conditions under which they are to be subjected.

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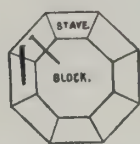
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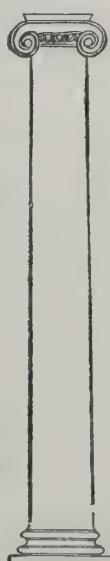


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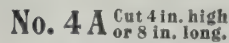
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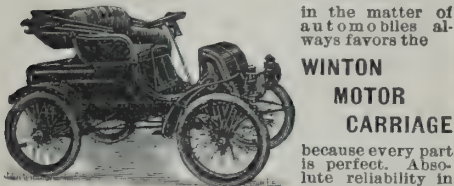
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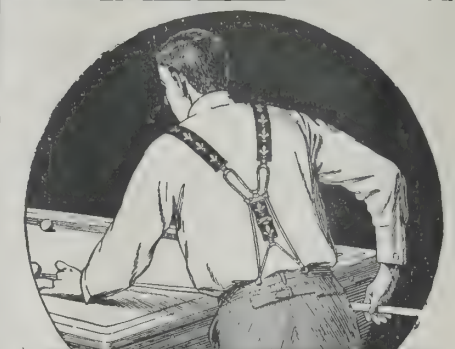
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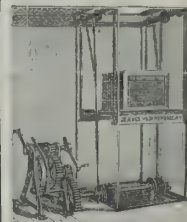
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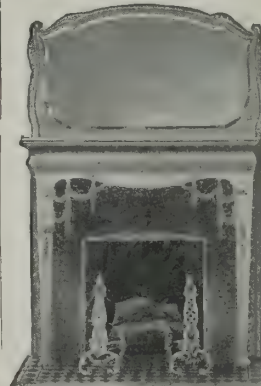
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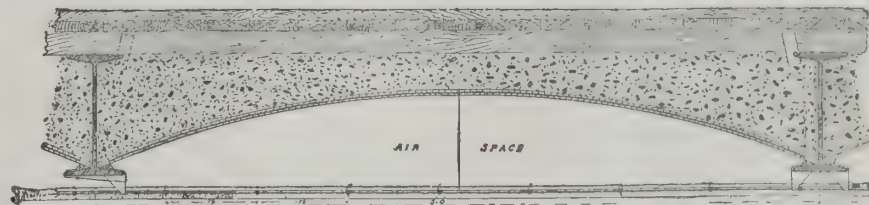
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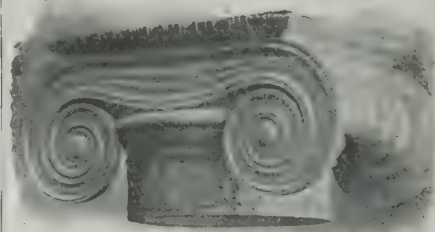
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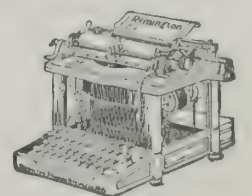


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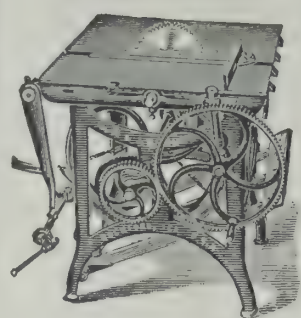
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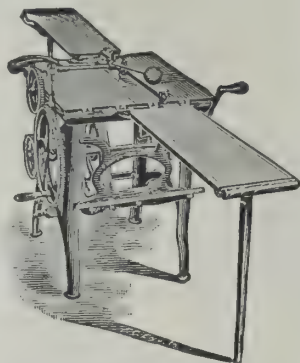
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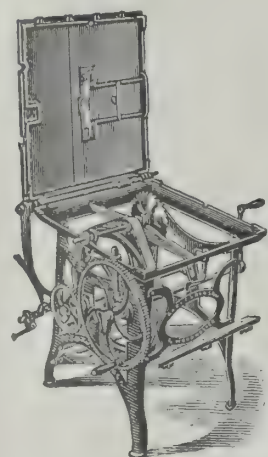
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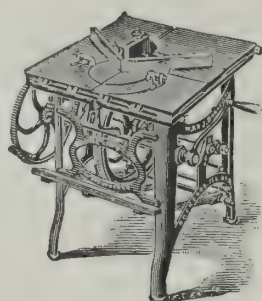
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Volume XI., January to June, 1891, price \$2. The volume contains twelve colored plates of great merit. There are sixty elevations of houses, churches, stables, carriage-houses, accompanied by several plans. One house in this number cost only \$695.03; the other houses range in price up to \$10,000.

Volume XIII., January to June, 1892, price \$2. As in the case with the other volumes, there are twelve colored plates; sixty-two houses varying in price from \$2,800 to \$25,000, and a number of chapels and churches, and also one schoolhouse. This is a particularly interesting volume.

Volume XIV., July to December, 1892, price \$2. The twelve colored plates of this issue are very attractive. There are fifty-seven elevations of houses, churches, and stables, each accompanied by a plan giving the sizes of the rooms. Some city residences are illustrated. One of the houses illustrated cost \$1,000 and one \$1,650, and the other houses vary in price.

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Volume XVI., July to December, 1893, price \$2. There are fifty-two engravings of houses, churches, etc., and each is accompanied by a plan. Some of the houses in this volume are as low in price as \$600. The thousand dollar workman's home at the World's Fair is also included in this volume.

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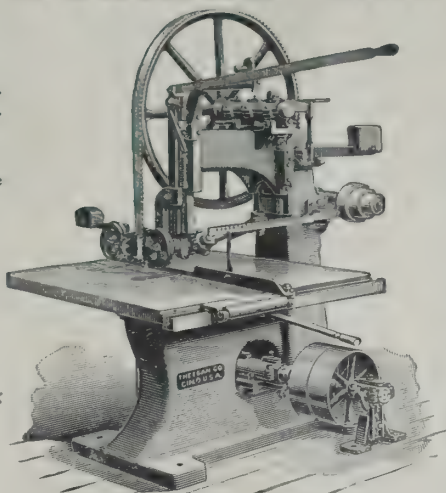
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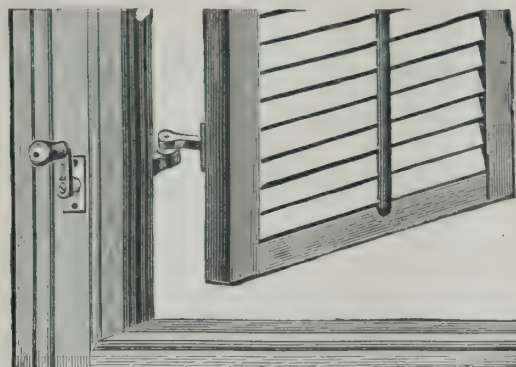
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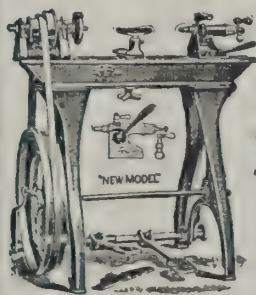
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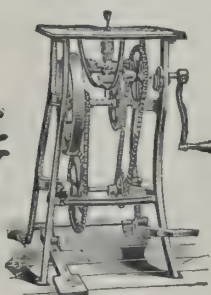
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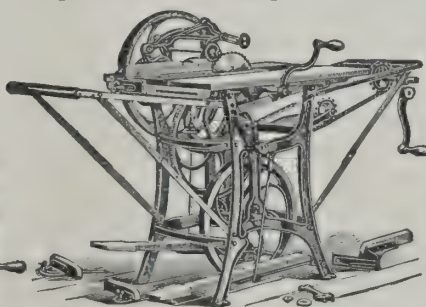
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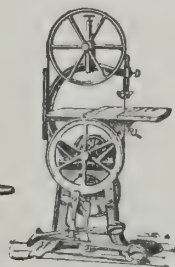
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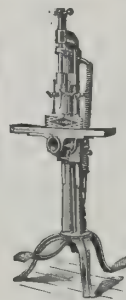
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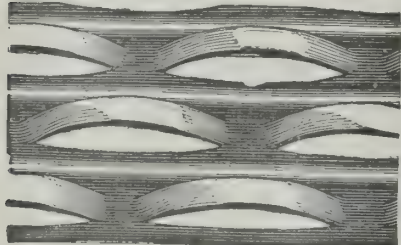
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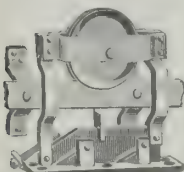
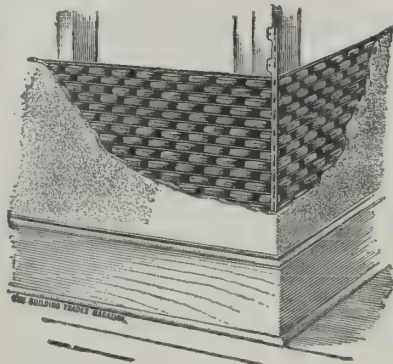
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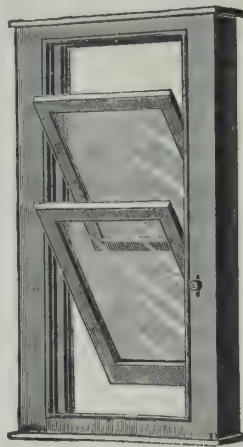
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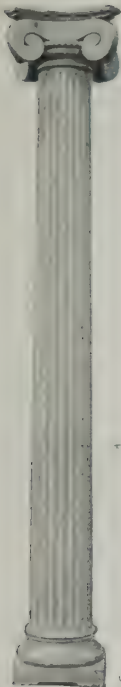
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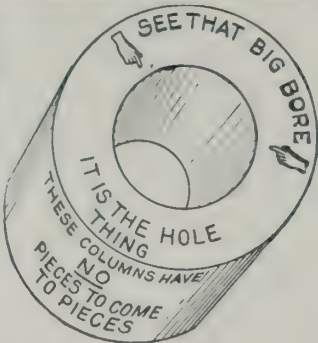
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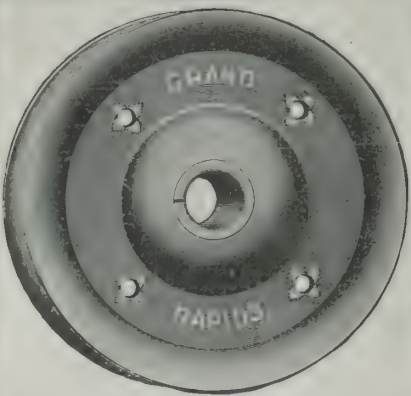
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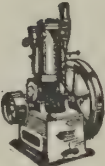
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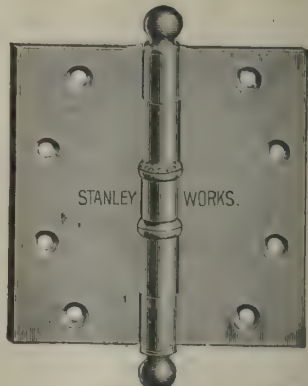
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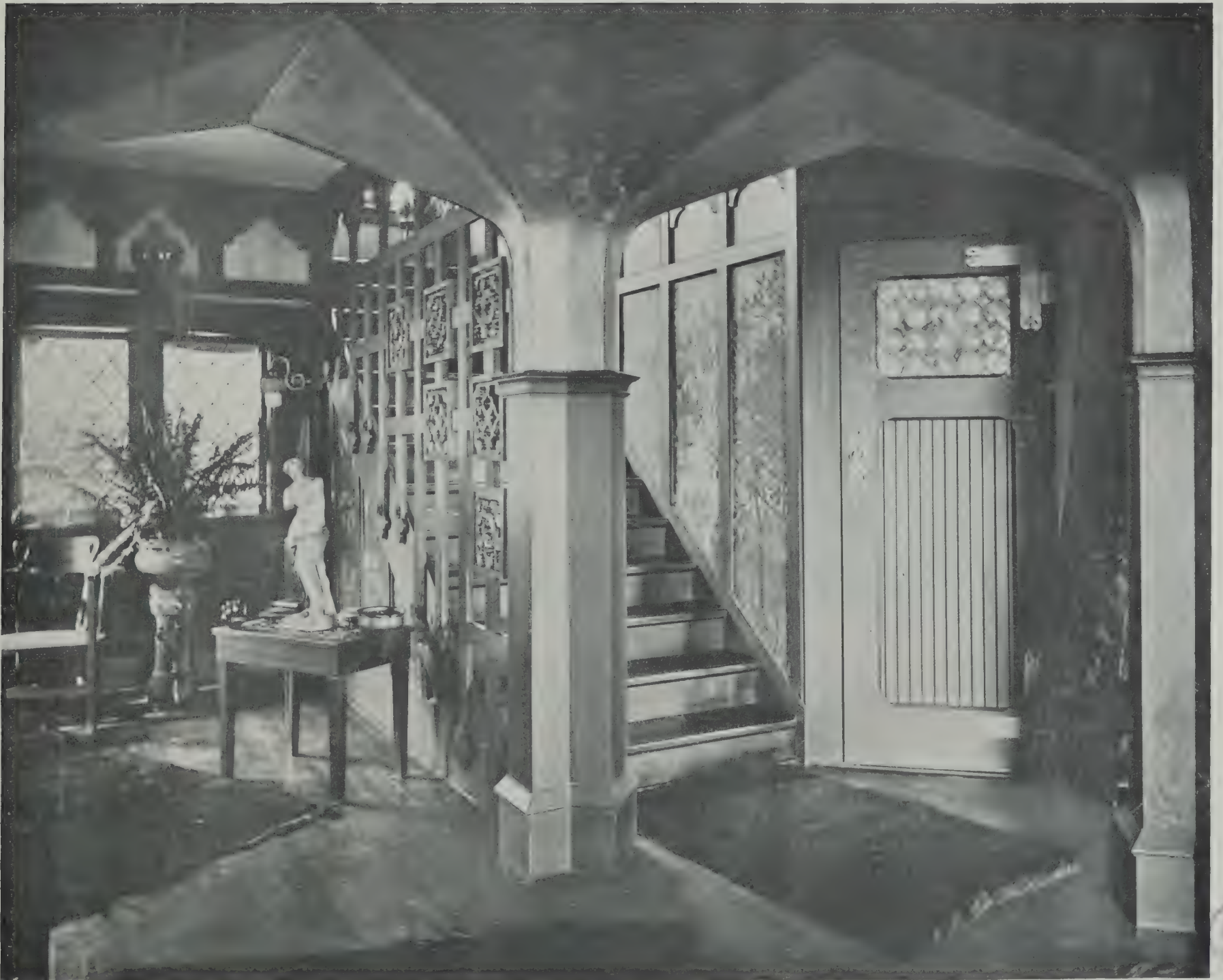
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AN ELIZABETHAN RESIDENCE AT MONTCLAIR, N. J.—See page 98.

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MONTHLY COMMENT.

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THE EDITOR,

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361 Broadway, New York.

There is much popular ignorance on the subject of lightning rods. The tradition concerning their value originated with Benjamin Franklin, who, exactly one hundred and fifty years ago this summer made his celebrated experiment with his kite, and only escaped with his life through sheer luck, for a more dangerous experiment has seldom been made. As a matter of fact, few lightning rods are now installed that constitute any protection whatever. A recent electrical authority in discussing this point remarked that the chief comfort one may derive from immunity from lightning strokes arises from the comparatively small damage they inflict, and the very small number of persons who meet death in this way. The immunity of ships at sea, when they may be the only visible objects within many miles, is pointed out as an illustration from which comfort can be derived. As a matter of fact the

subject of lightning is so difficult to study that no laws or rules concerning it that possess any trustworthy character have yet been formulated.

An English writer in a recently published book on agricultural buildings points out that the first element in their construction is simplicity and thoroughness. Another practical point is that the arrangement and grouping of the houses should be such that the purpose of each can be slightly modified to meet the demands of different tenants. This point is, perhaps, of special value to English farmers where farms are more apt to be rented than is the case with us here in America. But the suggestion is a valuable one, for while farmers, as a rule, are tenacious in custom, new ideas are constantly being introduced into agriculture that call for considerable changes in the uses of buildings erected for set purposes. There is real need in the farmer's looking ahead in the arrangement of his buildings.

Like most old buildings an old farmhouse is apt to be a delightful object, pleasant to gaze upon, roomy and commodious, and apparently as well fulfilling its purpose to-day as a hundred years ago. It would be pleasant if as much could be said of the modern farmhouse. One need but to travel through regions where old houses still remain, and compare them with their modern successors which may adjoin them, to realize how great is the gulf that separates natural construction from cheap effect. We can not build to-day as houses were built a hundred years ago. The old builders built naturally, with materials close at their hands, and in a style they were familiar with from childhood. The modern farmer starts out with distorted notions of what is good in house design. He has wearied of the old buildings which he could not appreciate. He wants something new, and a little gingerbread work will make up for any deficiency. So he moves into his new house and rents out his old one to his foreign-born help. Unfortunately the farmer is not the only one who does not know a good house when he sees it, or is unaware of the treasure his ancestors may have built for him.

The singular announcement is made that a costly set of china is being manufactured for the White House in England. No stranger news has been given to the public for many a day as this, nor one so detrimental to the progress of artistic china ware in this country. The matter is not connected with the tariff nor does it concern manufactures, although the makers of china in this country may well look askance at this new departure that, doubtless, has received the approval of an executive chosen by a political party warmly committed to the policy of the protection of our home industries. That the White House needs a new china set is doubtless true, as it is some years since it was freshly supplied. But granted the necessity it would appear that, being a possession of the nation, it should have been given to domestic designers, if not to domestic makers. We can never have a native American art until American designers are given opportunities. That so great a one as this should have been sent abroad is one of the most discouraging signs for American art that has been noted for some time.

HOW THE ARCHITECT HELPS THE HOME.

Of the problems that enter into the making of a home—a perfect home if you will, an ideal home if possible, let us hope—there seems to be no limit. Doctors, professors, specialists, economists—all sorts of cure-alls come forward with their nostrums and tell us just what should be done, and when the remedy should be applied. The learned ladies of the press write eloquently on the subject, and the public lecturer thrills one with his pictured illustrations of the dreadful places in which human beings are apparently content to live, and in which, perforce, they must die.

Morals and ethics, good living and right living, culture and education, high-minded ideals: these and many other excellent qualities have their place and their value in the elevation of the home, in the uplifting of the people, in the regeneration of the masses. But before work can be done, before labor can be accomplished, before results can be reached, there must be a place on which the effort may be made. Seed-sowing is not a laborious occupation nor a difficult one, yet the field must be had, and suitable preparation made before the seed is planted.

And so the good people who are energizing in the betterment of the home are apt to find their labor wasted because, thinking their point of view the only one, their reform the essential one, their effort the greatest, they do not look abroad over the whole ground, and thus never discover the very pertinent fact that the home is made, nurtured, developed by many causes, some more important in the one instance than another, some more vital to certain grades of people than another, some more obviously desirable, some more immediately helpful. It is perhaps because of this that the relations of the architect—the builder of homes—is so generally overlooked that he himself is not always aware how vital his part may be.

Yet no single element is so noteworthy in the making of a home as the work done by the architect. His task is the creation of the ground on which the home is reared. He fashions the surroundings, he prepares the stage on which the comedies, the idyls, the tragedies of home life, will be enacted. His part is the initial part, and the quality of the life that will be lived in the houses he builds will be determined by his labor in ways he never thought of when he first put pencil to paper or superintended the placing of the roof.

The house is the outward and visible expression of the home life, and the part the architect takes in the progress of that life is a very real one. His responsibilities are very great. His task is not light. It is far from an easy undertaking to plan, arrange, and build a home so that the best results will be obtained in every respect; and unless the best results are always obtained—the best possible under the conditions, the best possible with the sum of money allowed, the best permissible in accordance with the exigencies of site, climate, amount and direction of sunlight, the drainage and other essential factors—unless all these—to name but a few of the vital points—are developed at their very best it might, perhaps, be better that the house were never built at all.

The question, how the architect helps the house? is readily answered. He helps it by his knowledge, by his experience, by his observation, by his skill, by his art. There is limitless satisfaction in a good house, a house built well, amply supplied with modern and essential conveniences, and given a pleasing aspect in a pleasant locality. Such houses, unless inaccessible and beyond easy reach are seldom long vacant or seldom long in the market. The difficulty of house hunting is not to find houses—of those there are an abundance—but to find houses that please and promise to be satisfactory to their occupants.

The architect is a power for good and evil in home making. His responsibility is of the heaviest sort. He can not evade it nor can he thrust it upon others. It is his. Houses affect many people in many ways. Their influence is not always physical but often psychological, and the psychological influences are sometimes more penetrating and more disheartening because of their elusiveness. And so the part taken by the architect in home making is determined, quite frequently, by the intangible things as well as by those more directly visible and remediable.

If a house is cold and damp it can be improved and bettered, because these are matters easily understood and easily reached. But if it has every apparent quality a home should have and yet be found unpleasant without an ascertainable cause, the problem is more difficult. The architect is needed here, as well as in the more obvious instances, to prevent any reasonable person finding unreasonable fault with his building.

The architect helps the home, in the broadest sense, by making it a pleasant place to live in. And the pleasanter it is, the more wholesome the lives likely to be led there. All sorts of crime can be committed in all sorts of places; but the better the place the less the likelihood of crime. Criminals do not congregate in pleasant open places, but in dark, noisome corners. From homes to crime is a far cry; yet every criminal that ever lived once had a home of some sort; had they been better ones there would have been less evil in the world.

It is not, however, fair to fasten all crimes—save their own—upon the architect. Doubtless he has much to answer for without being held responsible for the contents of our prisons. The architect can not determine who shall live in the houses he builds. His responsibility is large and far reaching, but he is of no weight at all if the people who select his house and live in it do not know how to avail themselves of the skill he has shown and do not appreciate the art he has created.

The better the house, the better the home life, is a fair proposition. This being admitted, the position of the architect with regard to home life is obvious. He places it in a proper setting; he surrounds it with the safeguards of his craft; he remedies diseases of soil, drainage, light; he provides proper apparatus required in the exigencies of modern life; he is a specialist in home building exactly as he is a specialist in house erection. It is his business to better the home surroundings, and that he does by the excellence of his design, by the strength of his construction, by the knowledge he possesses of what is necessary, good, and true. He has studied the problem in all its aspects. He might, it is true, prefer to build vast palaces and monumental buildings for governmental purposes; but if he has helped to better human life, if he has made it more comfortable, if he has helped civilize it, he has performed a good work. And it is work that no other profession undertakes, no other craftsman accomplishes. The right architect is helping to right the home life all the time. He may not always succeed, but he is infinitely more likely to do so than one who sets out to build without his advice and directing care.

TALKS WITH ARCHITECTS

MR. WILLIAM MARTIN AIKEN ON THE CITY ARCHITECT.

ONE of the most important provisions of the amended Charter of the City of New York is that providing for a Consulting Architect for the largest boroughs. The new office thus created is one long needed in New York, and the city is fortunate, not only in finally obtaining such an officer, but in securing so competent a man as Mr. William Martin Aiken as the first of the consulting architects for the Borough of Manhattan. Mr. Aiken not only brings to his office a wide experience as a practising architect, but he has also had the unusual advantage of having been Supervising Architect of the Treasury, an office that, as is well known, conducts the largest architectural work now done by any single office in the world. During Mr. Aiken's incumbency a number of very important public buildings were erected or carried far toward completion. These included, among others, three exposition buildings for the government at Atlanta, Nashville, and Omaha; two new Mint buildings, one at Denver, the other at Philadelphia; the Appraiser's Warehouse or Public Stores in New York City; important alterations to the New York Post Office; also the very extensive and dignified government buildings at Buffalo and San Francisco, with more than seventy-five other buildings in various portions of the United States.

Aside from this he re-organized the office of the Supervising Architect of the Treasury Department to such a degree that now, under his most efficient successor, Mr. James Knox Taylor, it stands unexcelled in its administration.

"The office of Consulting Architect for the Borough of Manhattan," said Mr. Aiken in reply to my inquiry as to his official status in New York, "is very different from that of Supervising Architect of the Treasury, although the two offices have, perhaps, much in common. Being a new office its work as yet is hardly developed, and it is necessary to proceed with discretion and conservatism at the beginning, not only not to antagonize existing arrangements, but to map out a line of procedure which will develop in the future so that the greatest good may result to the city.

"I think the work of this office may be approached from two points of view. First, as a consulting architect whose duties shall be to advise the proper city officials in the details of architectural matters relating to buildings owned or occupied by the borough; or, secondly, as a consulting architect who shall be the authorized professional agent of the borough for the design, construction and preservation of all buildings which are to be erected for the use of the city, which are used by the city, or which it owns or occupies. The distinction is, of course, a very vital one, not only at the present moment, but also for the future workings of the office.

"The Charter, while stating that the president of the borough may appoint a consulting officer, is silent as to the details of his duties, and up to the present time these have not been accurately defined by any legal authority. So far as I can judge, however, that entails no present hardship or difficulty, and it seems best to act under the direct instructions of the President of the Borough of Manhattan, and to administer the office along the lines of least resistance, and to make a dignified beginning rather than to usurp indiscriminately all conceivable and possible powers."

"But are there not," I asked, "a number of architects now retained by various city officials in a consultative capacity? The Department of Bridges, the Park Department, the Department of Docks, the Charities Department, all appear to have consulting architects each engaged on the special problems that come before them. Do you come in contact with these

gentlemen, or is there a general board in which all the consulting architects may meet from time to time?"

"All the work you have indicated," returned Mr. Aiken, "is of a special character, and probably the existing arrangements are the best for the present interests. It would, undoubtedly, be an advantage if all the architects employed by the city could come in personal and official contact, but no machinery yet exists to bring about this condition of affairs. I think the most important and encouraging fact to be considered is that the city through its present administration is employing more competent architects, both in administrative and consulting capacities, than ever before. That, surely, is a distinct advance on previous conditions when no system at all existed, when favoritism and not professional ability was the motive for appointment, and when the city inevitably was put to much additional expense because of this fact, and satisfactory results could never be guaranteed, aside from the architectural merits of the buildings themselves, which was often questionable.

"Look, for a moment, at the former system. A building was given out for erection. No city official entered it during construction, no one had authority

foot of East Twenty-fourth Street, be set aside as a public laundry. The same report strongly recommended that no further wooden shelving, lockers, partitions, etc., be placed in the City Hall, all further such constructions to be of metal. It urged the necessity of public comfort stations and other stations which would provide accommodations for first aid to the injured. It recommended the reconstruction of the market at Spring and West Streets, and all future market houses, to be in accordance with the most approved markets of European cities, and urged the removal of all the buildings from City Hall Park save the City Hall itself. Not all of these ideas are new, but surely it is important to have them brought before the President of the Borough in an official way by an officer of the borough.

"In administrative work two important undertakings are under way. These include a general overhauling of the City Hall and many necessary repairs to it, and extensive repairs to the County Court House. It is true enough that the City Hall is a city building and does not belong to the Borough of Manhattan alone; and it is likewise true that the Court House is a County building. But the relations of both these structures to the Borough of Manhattan are so close and intimate that it seemed natural on the part of the President with the knowledge and consent of the Mayor to refer this work to this office. The work being done to the City Hall is complicated by the fact that it was not built for its present use and it is occupied by a large number of offices, not a few of which need a large body of employees. No important structural changes are anticipated, the work being limited to the amplification and consolidation of the offices of the Mayor; those of the President of the Borough, and those of the City Marshal, City Record; and a new Marriage Room in the basement. Wherever possible, the fireproofing of the building will be extended. The work for the County Court House is more extensive, and in the renovation of the heating, ventilation and plumbing is intended to make that building more healthy and better adapted to its purposes than it is at present."

It was obvious from our talk that Mr. Aiken occupies a post of great importance. Official architecture in this country is one of the most serious of current problems. It is not contended that the office of consulting architect shall be a creative office, designing all the city

buildings and superintending their erection. This work has heretofore fallen to the lot of individual architects, and sometimes it has been bad and sometimes good. When bad it has, as a whole, been very bad indeed; when indifferent, that quality has likewise dominated; when good, it has sometimes been of a very high degree of excellence. But obviously every great city has need of a consulting architect, whose duties shall be to advise city officials in architectural matters. If nothing more than this is done a great deal shall have been accomplished. In official architecture, New York has not always been a leader, but in the Charter permission for a consulting architect it has set a pace that other municipalities might well follow with credit to themselves.

One very important fact is apparent, and that is that the value of the office depends on the architect occupying it, and it is important to set a standard so high that in all future appointments to this office the City can not afford to install any one less efficient in the discharge of his duties. This is, perhaps, the crux of the question. New York has been fortunate in securing the services of so able and so experienced a man as Mr. Aiken, and it is an added advantage that he must create and develop this work.

BARR FERREE.

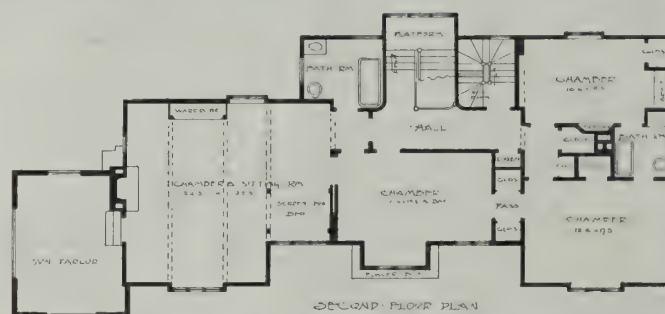
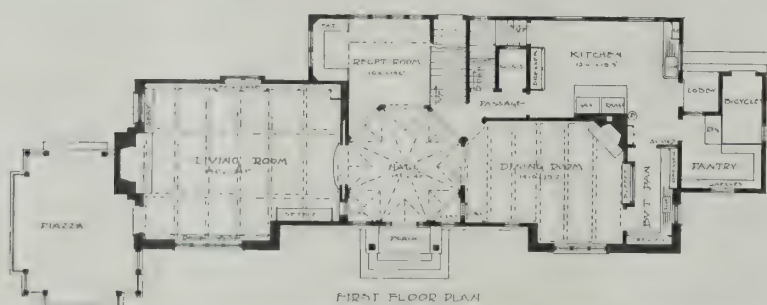


STAIRCASE IN THE HOUSE OF SAMUEL L. PARRISH, ESQ., SOUTHAMPTON, N. Y.—See [page 101]. Messrs. McKim, Mead & White, Architects.

to revise the work or to note changes as it proceeded. When the building was completed it was handed over to the city and there it was, whether it conformed to requirements and specifications or not. That was not good business. The city departments concerned with engineering problems either employed engineers directly, had them as officers, or engaged their services in a professional capacity as expert advisers to insure a standard of excellence of suitability for the purposes required. I take it that the present system is a direct application to architecture of the methods hitherto employed in engineering matters. I will not say that the results in architecture will be good because they have been good in engineering; but I will say that the present system of a consulting architect for the various boroughs is a sound business idea which must be beneficial to the city because it is just that.

"As to the work already accomplished by this office, that may be grouped under two heads, first in the matter of suggestion, and second in administration and carrying out of definite work. I have already submitted several reports to President Cantor, pointing out some desirable innovations, partly in work already provided for, partly in the way of matters which should be kept before the public's eye.

"One report, for example, suggested that a portion of the new bath building, which is contemplated at the



LIVING-ROOM.

AN ELIZABETHAN RESIDENCE AT MONTCLAIR, N. J.—See page 98.

MR. ALBERT F. NORRIS, ARCHITECT.



RECEPTION-ROOM



CHAMBER.



DINING-ROOM.

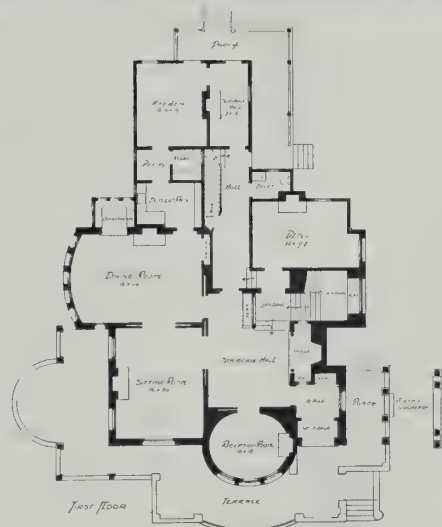
AN ELIZABETHAN RESIDENCE AT MONTCLAIR, N. J.—See page 98.

MR. ALBERT F. NORRIS, ARCHITECT.





A RESIDENCE AT STAPLETON, STATEN ISLAND.—See page 101.
MR. OTTO LOEFFLER, ARCHITECT.

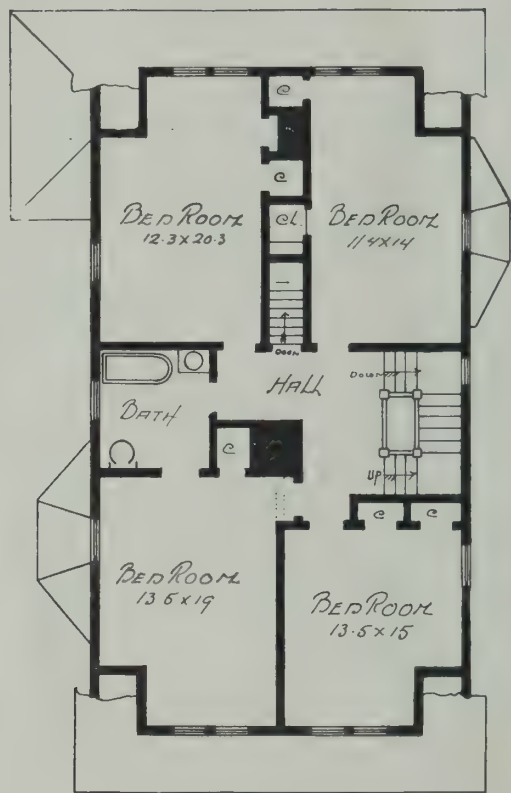


DINING-ROOM.

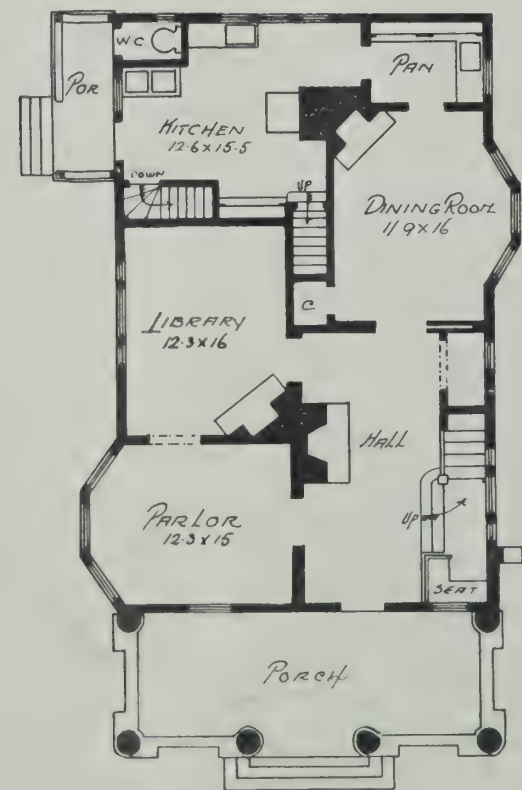
A RESIDENCE AT ATLANTA, GA.—See page 100.

MR. W. T. DOWNING, ARCHITECT.





SECOND FLOOR.



FIRST FLOOR



A TWIN GABLE HOUSE AT OGONTZ, PA.—See page 98.

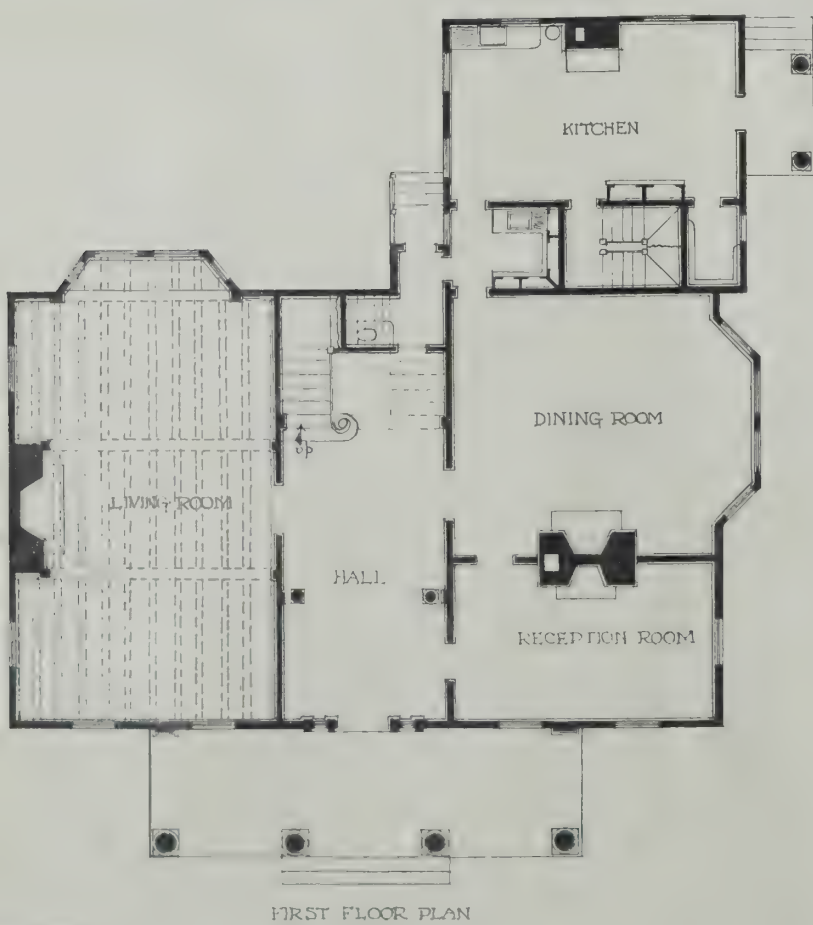
MR. LAURENCE VISS/ ER BOYD, ARCHITECT.



A TREE GARDEN.—THE ESTATE OF THOMAS STETSON, ESQ., NEW BEDFORD, MASS.—See page 101.

MR. CHARLES ELIOT, DESIGNER.

H2



A COLONIAL RESIDENCE AT HARTFORD, CONN.—See page 99.

MR. EGERTON SWATOUT, ARCHITECT.



HALL.



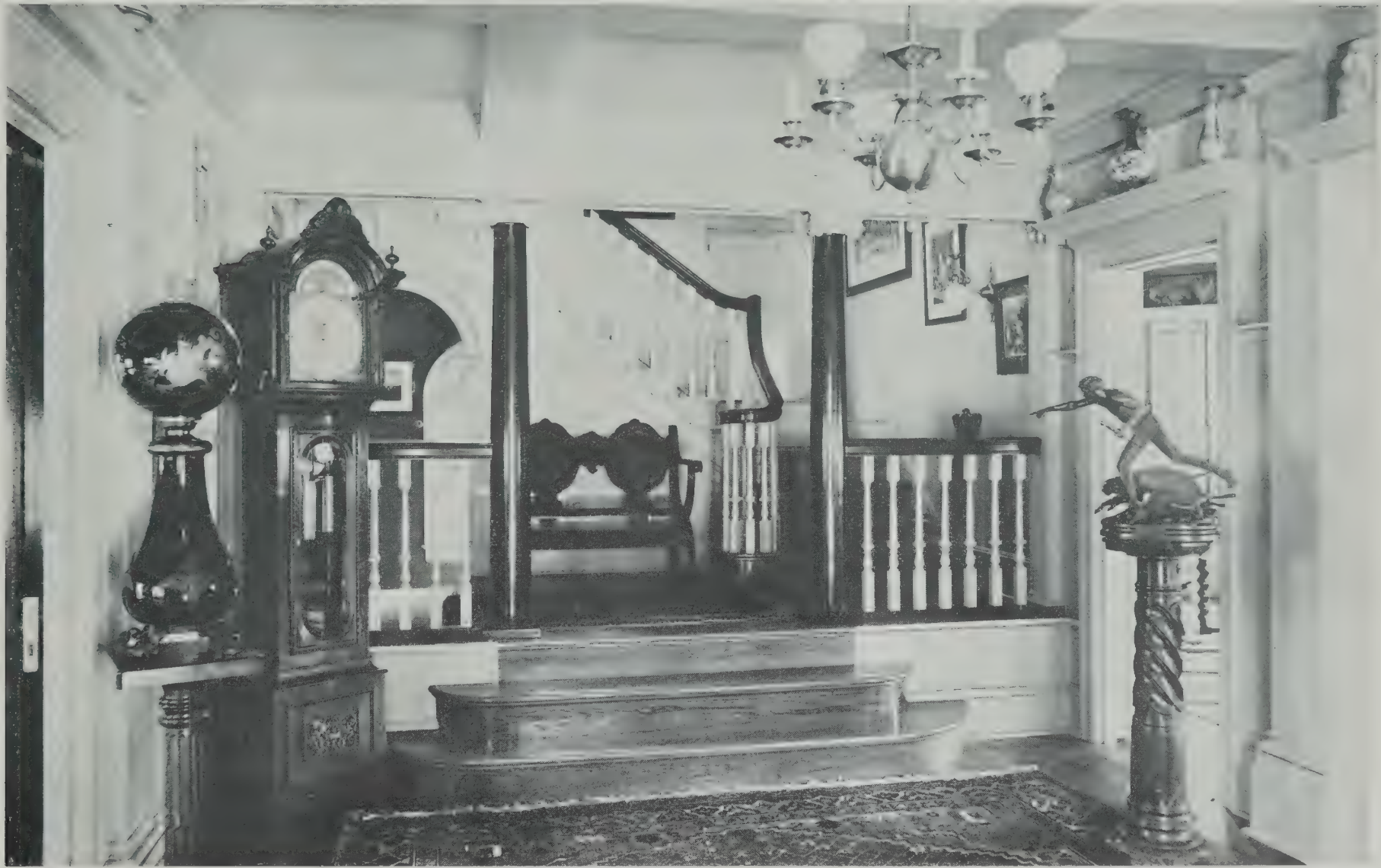
LIVING-ROOM.

A COLONIAL RESIDENCE AT HARTFORD, CONN.—See page 99.

MR. EGERTON SWATOUT, ARCHITECT.

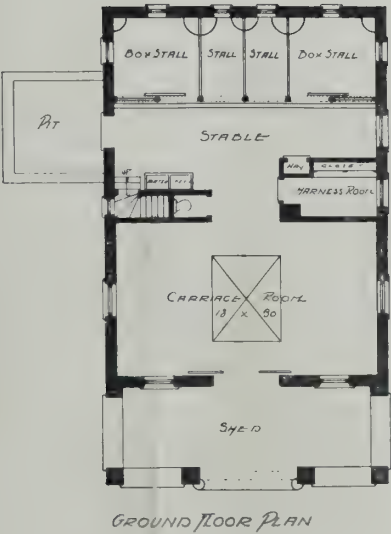


A RESIDENCE AT ELKINS, PA.—See page 99.
MR. LAURENCE VISSCHER BOYD, ARCHITECT.

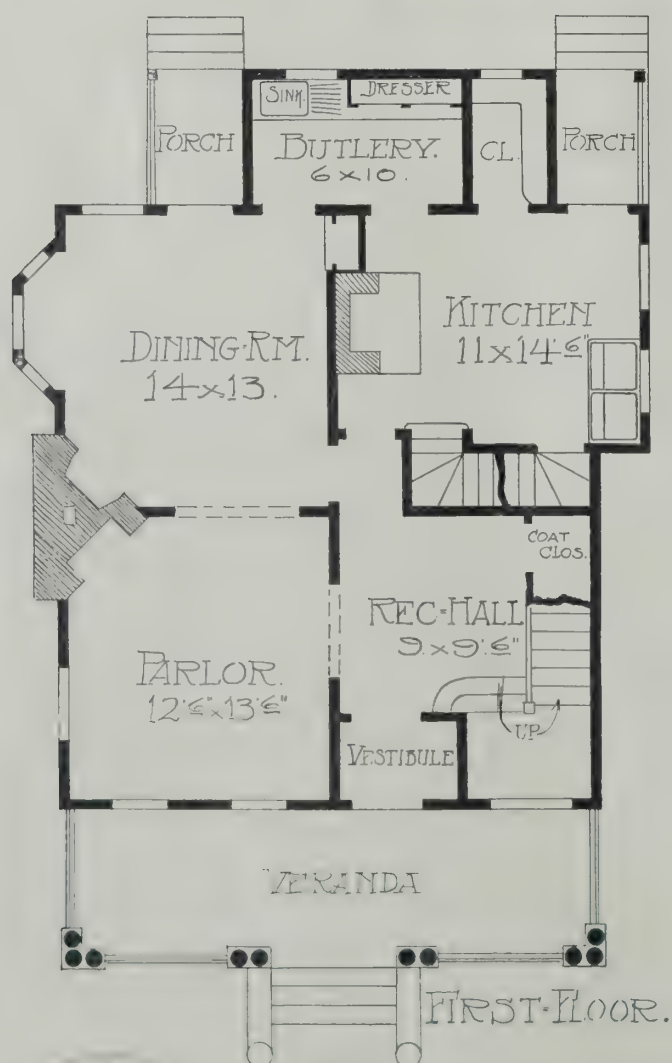


VIEW OF HALL.

A RESIDENCE AT ELKINS, PA.—See page 99.
MR. LAURENCE VISSCHER BOYD, ARCHITECT.



A STABLE AT ELKINS, PA.—See page 100.
MR. LAURENCE VISSCHER BOYD, ARCHITECT.



A RESIDENCE AT NUTLEY, N. J.—See page 102.

MR. WILLIAM A. LAMBERT, ARCHITECT.



AN ELIZABETHAN RESIDENCE AT MONTCLAIR, N. J.

THE residence illustrated on the cover and on pages 83, 86, and 87 was completed last fall for Mrs. Charles F. Coffin, at Montclair, N. J. It is located at the foot of the Orange Mountains, so that the crescent-shaped terraces of field stones, and the large forest trees, form a suitable foreground for a house so situated. From the covered gateway a winding path leads up to the several flights of stone steps that give access to the main entrance, which is placed in the center.

The style of architecture follows the English precedent more closely than is usual in American houses of this type, due in a great measure to the piazza being placed on the side and partly enclosed, and to the use of leaded glass in all windows. The windows throughout are apparently casements while in reality they are double hung and slide up and down in the usual manner.

The main part of first story is constructed of a mixture of clinker, washed and common red brick laid in red mortar with raked out joints. The remainder of the building is of frame with exterior walls covered with rabbeted sheathing boards, waterproof building paper, with rough-cast stucco on galvanized wire lath, between the half-timber work. All exterior woodwork, except sashes and doors, is rough sawn and stained one coat with a nut brown oil stain, thereby giving a soft, velvety finish that would have been impossible had it been planed. The corner posts, ranging timbers, brackets, etc., are made from solid timbers, thus avoiding joints and making it impossible to tell that the timbers are not those of the veritable frame. Pins, projecting one inch, are driven in at all intersections and timbers finished with nail-head ends. The stucco is tinted a rich buff shade. The roof is covered with sawn red cedar shingles stained a bright red. Five courses at the eaves are graduated from 8 inches to 5 inches, and the balance laid 5 inches to the weather. Dimensions: Front, 68 ft., side 29 ft. 6 in., not including piazza. Entire length of front, including piazza and extension, 95 ft. Height of ceilings: Cellar, 7 ft.; first story, generally, 8 ft. 9 in.; living-room, 9 ft. 3 in.; second story, 8 ft. 4 in.; attic, 8 ft.

The approach to front steps and platform of porch is laid with red brick in herring-bone pattern. The front door is supplied with massive hinge plates and thumb latch in rustless iron and a genuine antique door-knocker from an old house in England. An electric push button is placed at one side, above the front door, and is worked by an automatic lever, to which is suspended an ornamental chain. The hall is octagonal in form, and has a vaulted and groined ceiling. The eight openings are finished with flat Tudor arches. The hall is trimmed and wainscoted five feet high, with quartered white oak stained a dark rich brown. The walls and ceilings above this wainscoting are sand finished and stippled a dull gold on an underlying brownish tone. In the apex of the dome is placed an octagonal electric disk-light, glazed with a yellowish opalescent glass. On either side of the front door is a low closet with fret-sawn panels in the doors and top, one serving as a screen for the radiator and the other as a coat closet. Above these closets are high windows glazed with opalescent rondels.

The reception-room and stairs are placed back of the entrance hall, both being finished in quartered white oak stained same as hall. The stairs are separated from the reception-room by an ornamental screen, into which six Moorish, double faced and fretted majolica tiles of a greenish-blue tone are inserted. The half-timber effect is introduced on stairs and in the reception-room, the lower panels being filled in with tapestry and the upper ones finished with dull gold, as is also the ceiling. Some of the upper panels form shallow recesses for bric-a-brac. In the reception-room there is a recess with low ceiling, in which is built a seat with high settle ends, extending from floor to ceiling.

The dining-room is to the right of the hall, and like both reception-room and hall is trimmed with quartered white oak stained a dark brown. There is a base two feet high carried around this room, and above this, to a height of five feet, the walls are paneled with broad strips of oak, the panels being filled in with burlaps of light-brown tone and studded with large nails. Above this wainscoting the walls are covered with burlaps of same tone and afterward decorated with a design representing a grapevine, grapes, and leaves, and carrying out the flat arch scheme as suggested by the hall and other openings. The fireplace is built of clinker brick laid in red mortar and has an unglazed red tile hearth. The mantel and built-in sideboard in this room were designed by the architect, as was also the electrolier. This latter is made of oak, with stained glass panels in the sides of the lanterns, and is suspended from the ceiling by brass chains. The cornice and strips on the ceiling of dining-room are of chestnut, with gold rubbed into the grain. The panels of the ceiling are tinted a light brown.

Across the hall and opposite the dining-room is the living-room. Here quartered white oak is also used for the finish, but in this instance is stained a dark green. It has a heavy beam ceiling and the walls are covered with burlaps of a gray-green tone. The plaster panels between the ceiling beams are tinted green of a somewhat lighter shade than the side walls. The facing of the fireplace is of a green and blue glass mosaic, with touches of purple. There is a border carried around this facing consisting of alternate half-inch squares of black and gold glass. The hearth is laid with unglazed green tile. The picture in the recess above the fireplace is built in, and was specially painted to harmonize with the colors of the facing. In the arch above are placed two Moorish lanterns. The settle, wood-box, bookcases, and cabinets are all built in. Large iridescent glass tiles are placed in the doors of the cabinets and in the back of the settle. No varnish was used on any of the woodwork, it being simply stained and then given one coat of oil and turpentine. All burlaps were stained after being put up.

Kitchen and butler's pantry are furnished with all conveniences in the way of gas and coal ranges, sinks, dressers, etc. The kitchen is wainscoted five feet high with Keene's cement lined off to represent tiling, and finished with enamel paint. The woodwork of kitchen is yellow pine treated with spar varnish. In the butler's pantry the dressers are painted white enamel.

The second story contains a large combination sitting-room and chamber, three other chambers, and two bathrooms, and is so arranged that each room is accessible to a bathroom. A special feature is the sun parlor opening out of the sitting-room. It contains a radiator and is so arranged that it may be opened on all sides when desired.

The entire second story is trimmed with whitewood; one chamber and both bathrooms being finished with cream colored enamel and the remaining rooms stained dark tones. The woodwork of the sitting-room is stained a bluish green and the walls are covered with a sage green ingrain paper to picture molding. The frieze and ceiling are tinted a lighter shade of same color. The frieze is stenciled with a darker tone. The wardrobe, shown in the photograph, the mantel, cupboard, and bed screen, which latter suggests an old fashioned four-post bedstead, and within which the brass bed is placed, were all specially designed by the architect. The mantel has a dull brass facing and unglazed green tile hearth. The general scheme of this room is green and blue as suggested by the conventional peacock stenciled on doors of wardrobe.

The bathrooms have tiled floors and wainscoting, porcelain fixtures, and open nickelplated plumbing. There are three bedrooms, storage, and bathroom on the third floor. The cellar is well lighted and ventilated, and is concreted. It contains a servants' toilet, laundry, coal bins, and cold storage room. The house is heated by a direct and indirect system of steam radiation and is provided with gas and electric lights, call-bells, and speaking tubes, etc., complete. Mr. Albert F. Norris, architect, 150 Nassau Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A TWIN GABLE HOUSE AT OGONTZ, PA.

THE house which is illustrated on page 90 has been erected for William T. Roberts, Esq., at Ogontz, Pa. Its principal characteristics are the twin gable and plaster porch. The underpinning is built of rock-faced stone laid up at random. The first story is covered with clapboards and is painted a dark olive green, while the trimmings are painted white. The second and third stories are covered with shingles and are stained a mahogany color. The roof is also covered with shingles, and is stained a moss green. Dimensions: Front, 28 ft.; side, 42 ft., exclusive of porch. Height of ceilings: Cellar 7 ft.; first story, 9 ft. 6 in.; second, 8 ft. 6 in.; third, 8 ft. The hall is trimmed with oak, and has a paneled wainscoting, wooden cornice, and an ornamental staircase. The parlor is trimmed with pine and is treated with white enamel. The fireplace has a tiled hearth and facings and a mantel of Colonial style. The dining-room is trimmed with oak and has a wooden plate-rack and cornice. The butler's pantry is provided with a bowl, closets, cupboard, and drawers. The kitchen is provided with all the best modern conveniences. The second floor is trimmed with pine and is furnished with bedroom, ample closets, linen closet, and a bathroom which is fitted with a tiled floor, porcelain fixtures, and exposed nickelplated plumbing. There are three bedrooms and a trunkroom on the third floor. A cemented cellar contains a furnace, coal bins, etc. Mr. Laurence Visscher Boyd, architect, Fifteenth and Market Streets, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

**WINTER AND SUMMER PLANTS.**

To the true lover of flowers—and who is not—the changes of the seasons mean only the succession of fresh beauties. One's garden interests do not die with the fall, but are enlivened and invigorated with the zest of indoor gardening. A distinguished artist, not long since, drew in the pages of the BUILDING MONTHLY a fascinating picture of a winter garden adorned with sculpture. He conceived a large enclosure, covered with glass. Such a garden could, of course, only be possessed by a person of large wealth, and would be enjoyed by comparatively few. The everyday window garden, which every one may have if one chooses, is a very different affair. It entails little expense and can be brought to a high grade of perfection with relatively slight care.

So the plant lover does not despair because the season changes. The dying days of his outdoor garden mark the beginning of his indoor flowers. New plants succeed the old, new interests are created, fresh enthusiasms are formed, the cold days of winter cheered, and lo, spring is once more at hand!

LARGE AND SMALL GARDENS.

It is a mistaken notion to associate the ideas of size and cost with gardens in such a way as to create the impression that no garden is worthy of the name that is not large, and certainly is not a garden unless it is adorned with large plants, decorated with statuary and enclosed within an architectural framework. The splendor of a costly garden is unquestionably very great, for perhaps the most beautiful places in the world are just these spots, in which nature—the source of all beauty—is trained, helped, aided by artistic perception, wise skill, and brilliant imagination. Where these qualities can be obtained, where the site warrants the display, and where the means can be had, it is not too much to say that the utmost expenditure will be justified in its results.

But this is for the rich. Fortunately there is no law, either of man or nature, which limits the garden to the possession of the millionaire. The very humblest may have one, if he will, and it may be just as great a source of joy as the most costly. It is only when large gardens are imitated in small ones that the latter may become absurd. But do not make the error of thinking a garden must be big to be a garden. It is well to have a big one if one can, but it is better to have a small one than none at all.

PERSONAL LABOR IN THE GARDEN.

BEFORE beginning any garden work of any sort it is well that the projector should carefully consider the relationship his own personal labor may have to bear toward its success. If one is working on a large scale this problem becomes nothing at all, because one would then have as many men to labor for one as the grounds and the plan called for.

In the case of small gardens, such as surround an average suburban house of two or three city lots, the matter is different. One may live very well in a very good house in a most excellent neighborhood without having the means of employing a man to look after one's place. There is a limit, of course, to what one may do one's self, and there is also a limit in point of time at which one's enthusiasm will flag.

It is no secret that a certain amount of toil is necessary to the making of a garden, whether large or small; and sometimes it seems that the smaller the garden the larger the toil,—certainly if one must perform it all one's self. Even the inevitable lawnmower speedily becomes a burden; may not that of plant-growing be equally so?

That, however, is not a fair comparison, for plants give greater pleasure than mere grass, beautiful as the latter is; they are, therefore, entitled to greater labor. But the point is to be considered, what is the garden-maker to do himself? Can he spare the time, can he give the work, can he maintain his interest? These are weightier questions than may be apparent at first. While there are some enthusiasts who may maintain that the great joy of a garden is in its making and tending, it is nevertheless a fact with which many people will agree that a vast deal of satisfaction and delight can be had from a garden which one may own, but in which one has never personally labored.

THE roots of plants like canna and dahlias should not be dug up until after the first frost and the tops have withered.

Heating Talk

SOFT COAL FOR DOMESTIC USE.

MORE experiments in heating and cooking will be made this fall and winter by the people accustomed to the use of anthracite coal than one time seemed possible. The New York Times, in discussing this question—now certainly the most vital domestic question before the public—points out that soft coal in a range or cook stove will meet all the requirements of domestic use if ordinary intelligence is displayed in the management of the fire. The same is true of hot-air furnaces. With the low-pressure boilers used for steam heating somewhat more trouble may be expected, but this is largely a question of the type. Even in such devices soft coal can be burned without an amount of inconvenience comparable to that of an uncomfortably low house temperature. Probably the greatest difficulty will be that experienced in changing the habits of servants who have never known any fuel except anthracite. Filling the firepot of a range to the lids with soft coal will not give good results, and attempts to broil over fresh fuel will be disappointing, though for this purpose a bed of glowing coke is vastly better than one of incandescent anthracite. Care must also be taken in keeping oven temperatures uniform. Soft coal ignites very quickly, dies down with equal facility, and needs constant watching and frequent replenishing to maintain even a measurably constant fire. In these respects it more resembles wood than anthracite, but it burns very nearly as well in an anthracite range as in one built for a market where only soft coal is used as a domestic fuel.

BITUMINOUS COAL FOR THE FURNACE.

THE same paper offers some suggestions on the use of bituminous coal in furnaces. In an anthracite-heating furnace, it remarks, soft coal needs to be treated very differently from anthracite, but the difference consists in the management of draughts and checks. In the feed door of every furnace there is a slide damper to admit air over the fire. When anthracite is used this is opened only if it is desired to deaden the fire and lower the temperature of the house. With soft coal it must be left open all the time. The great volume of gases evolved from it in the coking process, which is the first stage in its combustion, calls for more air than can be had through the body of fuel, and unless this is supplied above the fire the greatest value of the fuel is lost up the chimney in unconsumed gases. Too much air for good combustion can be admitted over the fire, but this is not likely to be the case if the slide damper in the feed door of a furnace built for anthracite is left wide open all the time. The draught opening in the ashpit door, on the other hand, needs to be less widely and continuously open than for anthracite. With the same amount of bottom draught which it is customary to give hard coal, soft coal would stimulate the combustion in a blast furnace and call for constant stoking. The householder must also remember that the check draught in the smoke pipe, which with anthracite is usually kept open in moderate weather, can not be opened much, if any, with soft coal, or the house will fill with smoke. The best way is to leave it closed altogether. With attention to these details, which reverse the customary practice with anthracite, a furnace may be run on bituminous coal so as to keep a house entirely comfortable.

SUBSTITUTES FOR ANTHRACITE.

THE weekly Scientific American reminds its readers that although anthracite is the ideal fuel for cooking and heating purposes, it is not by any means the only one available. This has been proved by the enormous demand for gas stoves in the early fall; and those householders who make a practice of substituting gas stoves for coal ranges during the summer months will undoubtedly continue to use gas as long as the present high prices for coal continue. Another substitute that is available is the coal-oil stove, which has been perfected to a point at which it may be used both for cooking and heating at a cost which is considerably less than that of anthracite coal or gas; while careful attention to the question of combustion has enabled the makers to put upon the market oil stoves which will do their work without producing unpleasant odors in the house.

Wood is, of course, too expensive a fuel, at least in the large cities, to be suggested as an alternative, even at the prevailing high price of anthracite.

A COLONIAL RESIDENCE AT HARTFORD, CONN.

THE Colonial residence illustrated on pages 92 and 93 has been erected for John R. Buck, Esq., on Forest Street, Hartford, Conn. The treatment throughout the interior and exterior is in the Colonial style. The portico with its Doric capitals, and the front entrance way with its overhanging balcony are the principal features of the exterior, and are a copy of the Mme. Jumel house in New York. The underpinning is built of rock-faced red sandstone. The superstructure is of wood, and the exterior framework is covered with matched sheathing and then clapboarded, and painted white. The roof is covered with shingles and left to weather finish. Dimensions: Front, 57 ft.; side, 54 ft., not including the piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. 6 in. The interior throughout is trimmed with white pine and treated with white paint. The hall is a central one, and the entrance hall is separated from the staircase hall by an archway supported on fluted columns with Ionic capitals. The latter hall is provided with an ornamental staircase treated in white and provided with a mahogany rail. The entire hall has a paneled wainscoting and a wooden cornice. The living-room has a beamed and ribbed ceiling, and contains an open fireplace built of Roman brick with the facings and a hearth of the same, and a mantel of Colonial style. The reception-room is treated in yellow and white, and has an open fireplace furnished with white enamel tiling and a Colonial mantel. The dining-room is fitted with a paneled wainscoting and ceiling beams, and an open fireplace. The butler's pantry is fitted up with drawers, dressers, and cupboards. The kitchen is wainscoted and furnished with all the best modern conveniences. The second story contains four bedrooms, den, bathroom, and two servants' bedrooms over the kitchen extension. The bathroom is tiled and is furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains three bedrooms, trunk-room and storage-room. A cemented cellar contains a laundry, furnace-room, and coal bins. Mr. Egerton Swatout, architect, 156 Fifth Avenue, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT ELKINS, PA.

THE residence illustrated on pages 94 and 95 has been erected for Harry Spears, Esq., at Elkins, Pa. The underpinning is built of rock-faced Chestnut Hill granite. The remainder of the building is constructed of hard burned marked brick laid in white mortar. The trimmings are painted white. The roof is covered with shingles and left to weather finish. Dimensions: Front, 43 ft.; side, 57 ft., not including piazza. Height of ceilings: Cellar, 8 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. 6 in. The entrance is through a "Dutch" door of mahogany. The hall is trimmed with white pine and painted old ivory white. It has heavy door and window trim, with massive caps, a beamed ceiling and an ornamental staircase which rises from a broad platform on a rise of three steps. This platform is separated from the hall proper by columns of mahogany rising to the ceiling, which are finished with Ionic capitals. There is also a balustrade of white enamel balusters and a mahogany rail. The staircase has a similar balustrade and a newel-post formed of a cluster of balusters. The hall has also a dado of pale yellow furnished with a plate-rack. The drawing-room and library are treated in a green and white color scheme. The walls have a paneled dado, above which the walls are covered with a paper of large design. The woodwork is of white pine, painted old ivory white. The two rooms are separated by an archway, supported on mahogany columns. The library has a bay window with seats, and an open fireplace built of brick with facings and a hearth of Tiffany brick, and a mantel of mahogany. The dining-room is trimmed with brick and is stained and finished with black Flemish oak. It has a plate-rack and a wood cornice. The butler's pantry is wainscoted and provided with drawers, dresser, cupboards, and bowl complete. The kitchen and servants' dining-hall are trimmed with North Carolina pine, and are provided with all the best modern fixtures.

The second floor contains five bedrooms and two bathrooms. Two of the bedrooms are trimmed with brick, finished in mahogany, one brick natural finish, one chestnut, and the remaining bedroom with white pine treated with white paint. The bathrooms are wainscoted and paved with tile, and are furnished with porcelain fixtures and exposed nickelplated plumbing. There are four bedrooms and a storeroom on the third floor. There is a billiard-room fitted up complete in the basement, besides a laundry, furnace-room, coal and wood bins, and a store cellar. Mr. Laurence Visscher Boyd, architect, Fifteenth and Market Streets, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

The Household

A NEW IDEA IN BED FURNISHINGS.

AN exchange describes a new idea in bed furnishings. It is a bolster case of corrugated paper, such as is used to send photographs between, through the mail. It is hollow, and has two openings on its side, through which the pillows are put inside the roll for safe keeping and to be out of the way in the daytime. At night they are brought forth for service and the bolster laid one side. The bolster roll is covered first with white muslin and then with the material of the bedspread, whatever that may be. These cases are described as a great convenience in a flat, where space must be economically utilized and closet room is scarce. They cost, it is added, \$3 each.

HOUSEHOLD CHEAPNESS.

CHEAPNESS rarely pays in anything connected with the house. A cheap house is apt to be cheaply built and cheaply furnished, and it will not be a hard guess to conclude that cheap people live in it. That is the finishing touch, for even those with the most moderate resources do not fancy being thought cheap by their neighbors. The trouble with cheap furnishings is that they are so attractive in the matter of price. It seems hard to believe that a good looking article at \$1 may be dearer than another hardly better in appearance that costs twice that amount. As a matter of fact, it may be four times as cheap. Cheap furniture seldom lasts long; cheap curtains, cheap carpets, cheap decorations do not survive ordinary wear. It is always better to wait until a good article can be had than to buy one merely because the price asked is low.

CHILDREN'S WALL-PAPER.

WALL-PAPER of special design for the children's room continues to receive attention from the makers. A recent suggestion is wall-paper panels. They are about twelve by thirty-six inches, and are shown in broad poster designs of life-size duck mothers leading a fuzzy yellow brood to a brook, fox terriers pursuing a red and black rooster, and apparently overtaking him, and processions of beggars coming to town. There are also posters of children going to bed, saying their prayers, eating their breakfasts, or playing. They are all printed on stout paper, but unless they are to be framed it is a good plan to paste them on cheese-cloth or muslin before tacking them to the walls. The panels, adds a contemporary, cost about \$1 each.

AN ICELESS REFRIGERATOR.

AN iceless refrigerator using the principle of the evaporation of water to reduce temperature is described by a New York paper. It presents much the same appearance as do ordinary refrigerators. The upper half and the top are closed tightly. The lower portion is formed of inclined slats, through which air may be freely admitted. The door is made tight at the top and provided with slats at the bottom. The interior frame is entirely of galvanized iron. Burlap or other fibrous material is fastened upon this inside frame so as to form an interior wall, which stands at a sufficient distance from the outer wall of the structure to form an annular space between the two.

In the top of the inner structure is an opening covered with screen material. Through this and the slats around the bottom of the outer casing a constant draft of air passes, causing an evaporation of moisture, with which the fibrous material is saturated, so that the interior is maintained at a low temperature. Around the top of this frame is a strip of galvanized iron, with an inclined lip bent over. The edge of the burlap is fastened upon the face of the frame one-eighth inch above the edge of the lip, so that the water which is discharged upon this inclined surface will not flow over the burlap, but will be directed against it, so as to be absorbed. The burlap or fibrous material is fastened so as to be easily removable for change or cleaning.

Above the top of the frame is a tank for holding water. Projecting from the sides and ends of this tank, and at a suitable distance apart, are horizontal pipes having in the outer ends vertically disposed needle valves, which control the flow of water from openings in the lower parts of the pipes. These openings and controlling valves are situated in line above the slanting lips so that water delivered from the openings falls upon the lip and flows down into the fibrous material, keeping it constantly saturated.



UNITY IN FURNISHINGS.

UNITY of furnishings and treatment is one of the essentials in the making of a good room. Historic furniture has a fascination for almost every lover of the beautiful, and that it is generally good is due to the fact that only handsome pieces have survived. It is a clear case of the survival of the fittest. That, perhaps, is one reason why these articles are so much admired and so keenly cherished. Every good piece of old furniture deserves preservation and all the care that can be lavished upon it, but that does not mean that it will fit into any modern arrangement. A few old chairs in a modern room will not even give it an antique flavor, so strangely will they seem out of place. But old chairs and old tables in old rooms—there is fitness! Those fortunate beings who possess a complete set of old furniture do not deserve to be happy until they have created an old room in its entirety. Then, indeed, one may have something to be proud of!

ORDINARY FURNITURE, OLD AND NEW.

It is astonishing how frequently the old furniture makers produced the most artistic results with the barest materials and with the most commonplace designs. The art quality was, no doubt, often unconscious, but it existed and still exists to-day. An old kitchen settle, a discarded table once put to the most ordinary uses may, to-day, be a real treasure in a richly furnished home. Will the time ever come when the commonest of modern furniture will be guarded as a prized possession? It seems hardly possible, and yet a great quantity of commonplace articles of furniture are now discovered to have genuine decorative qualities. As a matter of fact, this art quality is real, and is by no means the effect of time or of misguided modern enthusiasm. It is a quality that exists and which almost every one can feel. Of all qualities it is the one most conspicuously absent from the commonplace furniture of to-day.

"ARTS AND CRAFTS" FURNITURE.

THE modern "Arts and Crafts" furniture, as it is called, partakes, in a measure, of some of the fine qualities of old work. It is true there is much offered under this head that is heavy and strange in design, but that is simply because the modern craftsman does not work naturally. He forces himself to design, while the older craftsman designed naturally and because he could not help it. It is reasonable to suppose that, with increased study and practise the modern furniture will assume the lines and shapes of pure beauty we admire in the old. That is one of the results of study and one of the ends of practise. Meanwhile it is well to remember that individual and special designs may not always be genuine works of art simply because there is nothing else like them under the sun. Singularity and uniqueness doubtless have their place in the world, and even in such homely articles as pieces of household furniture, but they need more than this to win the lasting delight which is the true measure

THE PARLOR SUIT.

A GREAT deal of furniture is made to-day that has no artistic excuse for its existence and whose utilitarian qualities are of so low an order that, on such grounds, it is equally useless. The modern "parlor suit" is very apt to be a source of sorrow after it has been installed a few months. It is the most useless contents of a house, too fine, perhaps for constant use, not well enough made to survive moderate wear. It is, in fact, only intended for rooms used occasionally, and then only when one is arrayed in one's best clothes. Really sensible people will banish such frivolities. Chairs and tables must have a use or they will fail in their organic purposes. And if a chair is an ornament and nothing else, it is surely a very strange kind of a chair.

THE FAMILY LIBRARY.

NOTHING is more dignified than to possess a room designated by the name of "The Library." Both words require capital letters, and they are frequently spoken as though spelled with capitals throughout. But there are libraries and libraries, and the mere fact that a few books are set up on a few shelves does not entitle a room to be called in this high-sounding manner. Books are one of the essentials of every good home, for the habit of reading, if it does not come naturally, is one that should be enforced by practise. But let us at least be honest, and if our books be few, refrain from appropriating a name that belongs to a considerable collection of books.

A RESIDENCE AT ATLANTA, GA.

THE residence illustrated on page 89 has been completed for John W. Grant, Esq., at Atlanta, Ga. The building is treated in a Romanesque style; the exterior is a combination of white pressed brick, rough gray stone, terra-cotta, decorative plaster work, and leaded glass; the roof is covered with red Spanish tiles. A wide terrace provided with a Dutch tile floor surrounded by a high stone coping extends across the front of the house, while a porte-cochère forms a carriage entrance at the side. Dimensions: Front, 54 ft.; side, 77 ft., exclusive of porches and terrace. Height of ceilings: Cellar, 8 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. 6 in. The interior of the house contains many conflicting ideas and styles homogeneously combined by the superior talent of the architect. The vestibule, a small but elegant apartment, 6 ft. by 7 ft., is exceedingly well designed. The heavy woodwork is of old English oak to match the storm doors, and is carried up to the ceiling in handsome panels. The windows and the heavy door leading into the inner hall are of leaded glass. There is a wall seat in the vestibule upholstered in dark leather. The staircase hall is trimmed with mahogany and has a paneled wainscoting and a beamed ceiling. The principal feature of the hall is the ingle nook, provided with a superb mantel of Numidean marble and seats at either side of the same. The large staircase is provided with a broad landing, carved newel posts, balusters and rail. The main landing has a paneled seat, over which there is a window glazed with delicately tinted leaded glass. The most attractive apartment is the reception-room, which is oval in form, and is treated in white and gold carried out in Rococo designs. The two features of this room are the fireplace and mirror at one end of the oval and a medallion of painted tapestry set in an elaborate piece of scroll work at the other end. The sitting-room is trimmed with mahogany and has bookcases built in and an open fireplace. The dining-room is the most ornate room in the interior, and is treated with white and gold, carried out in Rococo designs. The side walls are wainscoted in panels and the ceiling is finished after a special design. A carefully planned and skilfully executed sideboard occupies the north end of the room, to which glass closets are attached, and above which open a succession of leaded glass windows. The fireplace, furnished with a tiled floor, Numidean marble facings, carved mantel and mirror, is one of the other features of this room. The conservatory, which opens from the dining-room by a square arch provided with columns, is attractively fitted with white marble floor and flower shelves and white enamel trim. The den, a smoking-room, is trimmed with old English oak. The walls are finished plainly in a deep red and are surrounded by a five foot wainscoting of Spanish tiles of a highly decorative character, their design being carried out principally in red and blue with an intermingling of other colors. The larder, pantry, kitchen, and servants' hall are well planned, and are fitted with all the best modern conveniences.

The second floor is well arranged for comfort. The main bedroom occupies the central front and is supplemented on the south by a commodious dressing-room, beyond which is a bathroom, while at the north end a boudoir is provided. This suite is treated with white enamel, while the walls are in pinks and blues. There are two other bedrooms, bathroom, dressing-room, linen closet, besides a servants' bedroom and a trunk room over the kitchen extension. The bathrooms have white marble wainscotings and tiled floors, and are furnished with porcelain fixtures and exposed nickel-plated plumbing. The third floor contains extra sleeping rooms and storage space. A cemented cellar contains furnace-room, laundry, coal, and wood bins, etc. Mr. W. T. Downing, architect, Atlanta, Ga.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A STABLE AT ELKINS, PA.

THE stable illustrated on page 95 has been completed for Mr. Harry Spear, at Elkins, Pa. It is built of wash brick laid with a Flemish bond in white mortar. The trimmings are painted white. The roof is covered with shingles and finished natural. The shed at the front is a convenience; it has a cement floor, and a ceiling of North Carolina pine of natural finish. Both the carriage house and stable have a concreted floor, the former being provided with a carriage wash connected to a drain. The harness-room is provided with a closet with sliding glass doors. The stable contains two single stalls and two box stalls fitted with the usual ornamental iron fixtures. This stable is furnished with hay slide and water and feed attachments. The second story contains ample room for the storage of hay, and coachman's quarters. Mr. Laurence Visscher Boyd, architect, Fifteenth and Market Streets, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.



A STUDY OF WATER QUALITIES.

A COMPREHENSIVE study of the quality of water has been undertaken by the Division of Hydrography of the U. S. Geological Survey, with the cooperation of laboratories in different parts of the country. The division has been carrying on investigations of the quantity of water available in the various States, which have already proved of much value in projects for power development. The examination of the quality of the water will increase the usefulness of these investigations by supplying information desirable in estimating the availability of streams as sources of supply for potable or manufacturing purposes, and for this reason the new venture is to be commended. In order to secure uniformity in the work, a circular has been issued advising the adoption of the analytical methods recommended by the special committee of the American Public Health Association.

THE NEEDS OF TOWN DWELLERS.

IN an address before the Royal Institute of Public Health Mr. E. George Mawbey enforced the importance of pure air and water, a dry and clean subsoil, a diminution of the noise from traffic in streets, exercise, personal cleanliness, healthy and cheerful homes and surroundings, and plenty of honest and well-directed work. Among the requirements which he put forward were open spaces in the centers of population, ample air space in dwellings and around our factories and workshops, due restrictions upon noxious trades, the "electrification" of poisonous underground railways, the diminution of malarial and other troubles by the reclamation of swamps, improved drainage, the carrying out of flood prevention schemes, and the compulsory provision of a practically pure public water supply, not only in large towns, but also throughout all rural districts where large populations are now depending for their supply upon shallow and frequently highly polluted wells in close proximity to the dwellings. The authorities, he said, should facilitate and even enforce joint schemes by groups of municipalities and local authorities for the supply of wholesome water within the various watersheds of the country. It was notable that the architects of the present day were making an earnest study of hygiene. There was perhaps no more difficult problem to be solved than the purification of sewage, and certainly nothing had given so much hope of a satisfactory solution of the difficulty as the recent experiments which had been conducted on bacteriological lines.

A WATER-TIGHT BASEMENT WALL.

SOME suggestions on making a basement wall water tight are given in Municipal Engineering. If the pressure and amount of the water are not too great, it says, the wall can be made water tight by removing the mortar in the joints between the bricks or stones to make a good junction and then plastering it with a coating of Portland cement mortar of proportions about 1 of cement to 1½ or 2 of sand, the cement being in sufficient quantity to insure complete filling of the voids in the sand. If this coat can set before the water gathers behind it with pressure enough or moisture enough to prevent adhesion to the wall, it will probably keep the water out effectually.

If the pressure of water or the porosity of the wall is too great, it will be necessary to put the water tight coat on the outside of the wall by digging out the earth and applying the coat with a trowel or as a grout. The extra cement used in a grout would probably pay for the necessary excavation in common earth. The "Directory of American Cement Industries and Hand-Book for Cement Users" recommends the addition of lime to make mortar water tight, where not exposed to the weather, using, say 1 part cement, 1 part lime putty, and 3 parts sand.

CLEANLINESS IN BUSINESS DISTRICTS.

AN address by D. W. H. Moreland, before the League of American Municipalities, contained some practical suggestions on cleanliness in the business districts in large cities. Keeping in touch with the merchants in the business section of the city and enlisting their cooperation in keeping refuse from their stores off the streets was, it was pointed out, productive of much good. A circular letter addressed to each merchant along the streets radiating from the city hall, calling attention to the importance of the matter, and asking that all store sweepings be placed in receptacles in the basements or alleys will meet almost universal compliance. A request that all washing of store windows be done before 9 o'clock in the morning has been cheerfully complied with in Detroit.

House Suggestions

THE "TENT CITY."

THE "tent city" is more or less peculiar to California; it is described in a recent issue of the Scientific American. Its equipment constitutes a business in itself. At Avalon was a large circus tent which in winter contained furniture of every description, carpets, matting, oil stoves, dishes, lamps, and other household articles by the score. Here were also tents of all sizes, floorings, in fact, the "tent city" was here in winter quarters, everything classified and arranged with order and system. In April or May a gang of men descends upon the winter quarters, and like magic the vacant lots are filled, the floors fitted, tents erected, carpets laid, furniture placed, water turned on, and presto! in a day a city is reared as though by the touching of the proverbial button. Each tent is neatly and well furnished, and can be rented for a nominal cost, the owners of the island giving the ground rent and free water, each lot being sewered and perfect in its sanitary arrangement. The visitor can rent a tent for sleeping, a parlor and kitchen, or he can rent a single room. In the center of the "tent city" is a store where every description of food carefully prepared and cooked can be obtained.

A PORTABLE HOUSE.

A SMALL portable and transformable house, constructed on the Silbiger system, has recently been erected at South Kensington, and is described by the Builder's Journal. This system, it is claimed, offers distinct advantages for buildings in new countries where skilled labor is scarce and means of transport deficient. Buildings on this system are composed of panels, preferably of wood, all of the same size (about three feet wide by eight feet or ten feet high) and supported by uprights. An ingenious device is adopted to fasten the panels to the uprights; each of the latter has two panels clamped to it by the aid of two or three bolts with thumbscrews, and the various surfaces are so shaped at their meeting point that, when the screws are tightened, a firm, strong joint is produced on much the same principle as a carpenter's dovetailed joint. The panels being uniform, any one may be used in any part of the house, not only for outside walls but also for inside partitions; thus the trouble of numbering the different parts for erection is avoided, and in the event of some of them being lost or damaged in transit, the whole work of construction is not delayed, but the house can be erected, though perhaps short of one room or of a partition.

The doors and windows are of the same size as the panels, and are interchangeable with them; hence the owner of one of these houses, whenever he is inclined, can alter the position of his doors and windows, and transmogrify the whole of his dwelling, inside and out, simply at the cost of slackening a few thumbscrews and moving the panels, etc., into their new positions. No foundations are required, but the wooden feet which carry the uprights and the timbers of the floor must naturally be placed on the level. The roof is borne by the uprights, to which it is securely fastened, and ingenious safeguards are provided against the entrance of rain or damp.

TEN REASONS FOR EMPLOYING AN ARCHITECT.

1. CONVENIENCE and completeness in the plan are assured.
2. Design and style will be correct. Proportions and harmony preserved.
3. The material and construction will be carefully specified and you are protected in your contracts.
4. The details of construction made in full size prevent the possibility of error in building.
5. Bills of quantities of materials enable you to make exact contracts at fair prices, and no guessing.
6. Plumbing and sanitation are properly provided for, thus protecting the health of the family.
7. Heating and ventilation, two very essential features, can only be arranged for by a skilled architect.
8. Painting and decoration are judiciously arranged for. Choice of paints, colors, etc., and their proper application.
9. Economy and security are rightly combined in showing how to draw a properly worded contract.
10. A good architect will embody your ideas in combination with his practical experience, and the completed house will be satisfactory. Without his plans, expensive changes are likely to be made, and these are much more costly than plans.—Building News (Evansville).

A RESIDENCE AT STAPLETON, STATEN ISLAND.

THE engraving shown on page 88 is that of a residence recently erected for Samuel Anderson, Esq., at Stapleton, Staten Island. The building is constructed in a substantial manner and with Colonial detail. The underpinning is constructed of rock-faced blue granite with pitched joints. The superstructure is of wood, and the framework is sheathed with matched boarding; the latter is covered with double thick sheathing paper and clapboards. The whole exterior is painted Colonial yellow with white trimmings. The roof is covered with shingles and painted a slate color. Dimensions: Front, 43 ft.; side, 36 ft. 6 in., not including piazza. Height of ceilings: Cellar, 9 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. 6 in. The plan shows a central hall and vestibule. The vestibule has a quartered oak paneled wainscoting. The hall is trimmed with quartered oak, and it has a paneled wainscoting, nooks on either side of the vestibule, furnished with panel seats, and an ornamental staircase of quartered oak, with a fluted column rising from the floor to the ceiling forming the newel, and also a separation from the main hall by the introduction of a grilled screen. The parlor, library and dining-room are trimmed with quartered oak, and they have open fireplaces furnished with tiled facings and hearths and oak mantels. The butler's pantry is furnished with a sink and ample dressers. The kitchen is provided with a sink, dresser, pantry and an open fireplace fitted with a Boynton Furnace Co.'s "Lakewood" range. The second story is trimmed with whitewood finished in its natural state, and it contains five bedrooms, ample closets and a bathroom fitted up with a Standard tub and Hoffman-Hinsdale fixtures with nickelplated connections. The third floor contains five bedrooms and ample storage room. The cemented cellar contains a laundry, a hot water heater of the Boynton Furnace Co.'s make, and coal bins. Mr. Otto Loeffler, architect, 68 Bay Street, Tompkinsville, Staten Island. Cost, \$8,000 complete.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A TREE GARDEN.—THE ESTATE OF THOMAS STETSON, ESQ., NEW BEDFORD, MASS.

It is seldom that the beauty of trees, arranged beautifully, arranged with taste and with care, set out with knowledge and permitted to grow in a way that produces the best effect is so finely illustrated as in the estate of Thomas Stetson, Esq., at New Bedford, Mass., designed by the late Charles Eliot, three illustrations from which are reproduced on page 91.

Mr. Stetson's estate is a considerable one, and embraces most of the features seen in the cultivated estates of men of means and culture; but the illustrations reproduced are confined to the tree effects alone, because these are of exceeding beauty. From the present standpoint, therefore, it is quite just to speak of these grounds as a "Tree Garden."

The time is not far distant when trees were grouped in a way that bunched their foliage, and left to mature as changed conditions combined with nature permitted. Happily this is no longer the case. Of all forms of vegetation the tree is the most permanent. Its growth is the longest, its size the largest—taking trees in a generic sense—of all forms of vegetable life. A tree once planted and started on the way to growth is likely to grow indefinitely, unless old age and decay intervene when not expected. But the permanency of the tree is the chief reason for observing place in planting it. It can not be removed like a plant in a tub, and its growth is so slow that it can not be ruthlessly cut away, as perhaps a shrub may be dispensed with.

Thus tree planting, tree arrangement, tree growth, tree care, has become an art, requiring a fine artistic perception, a keen appreciation of the value of masses, an eye for color, and a prophetic vision that looks well into the future and perceives the tree at its maturity.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A PAGE OF COLONIAL MANTELS.

THE photographs reproduced on page 97 illustrate some modern types of Colonial mantels.

Nos. 1 and 2 are from "Eastover," the residence of John Goodchild, Esq., at Wyoming, N. J.; Mr. J. W. Dow, architect, Wyoming, N. J.

Nos. 3 and 4 are from the residence of Arthur B. Stone, Esq., Mount Vernon, N. Y.; Mr. Herbert, architect, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A MODERN COLONIAL STAIRWAY.

THE illustration on page 85, reproduced from a photograph taken expressly for the BUILDING MONTHLY, shows the staircase in the house of Samuel L. Parrish, Esq., at Southampton, N. Y. It was designed by McKim, Mead & White, architects, New York.

Legal Notes

ARCHITECT'S CERTIFICATE CONCLUSIVE.

WHERE, by a contract, an architect is made the arbiter and judge as to the proper doing of the work, his certificate is conclusive, unless shown to have been mistakenly or fraudulently issued. *Heberlein vs. Wendt*, 99 Ill. App. 506.

CHANGE IN CHARACTER OF LIEN.

THE mechanics' lien law (Hurd's Rev. St. 1899, p. 1112, Section 28), providing for a lien in favor of the person who shall improve premises by contract with the owner, or with one whom the owner has authorized, does not contemplate a change in character of the lien, by an agreement of the parties made after the materials have been furnished. *Miller vs. People's Lumber Co.*, 98 Ill. App. 468.

DESTRUCTION BY FIRE BEFORE COMPLETION.

SUBCONTRACTORS who agree to do the plumbing and tinsmithing in a building for a specified amount in gross are not entitled to recover any part thereof, where the building is destroyed by fire, without the fault either of themselves or the principal contractor or the owner, before the work is completed, and the contractors have not caused any such delay as would justify a rescission of the contract. *King vs. Low* (C. A.) 3 Ont. Law. Rep. (Can.) 234.

PARTY WALL AGREEMENT.

ONE purchasing a lot agreed with the vendor, who owned an adjoining lot, to erect a three-story building and wall on the boundary, with apertures for joists to be used by the vendor at any time he might choose to erect "a building of like dimensions." On an application by the vendee for an injunction to restrain the vendor from erecting a two-story building, it appeared that such a building would not weaken the wall or entail greater danger from fire than one of three stories. *Held*, that in view of the facts and phraseology of the agreement, the phrase "for a building of like dimensions" must be construed as referring only to the extent to which joist apertures should be let into the wall, and did not limit the dimensions of the building the vendee might erect. *Lagomarsino vs. Crowe et al.*, 32 So. Rep. (Ala.) 661.

RIGHT TO MECHANIC'S LIEN.

A BUILDING contract having expressly provided that there shall be no lien or right of lien, and being recorded as provided by Act Pa. June 26, 1895 (P. L. 369), so as to be binding on subcontractors and material men, provision that final payment shall not be due till all mechanics' liens and material men shall have acknowledged full payment by the contractor is merely for the protection of the owner, and gives no right of lien. *Ludowici Roofing Tile Co. vs. Pennsylvania Inst. for Instruction of the Blind et al.*, 116 Fed. Rep. (U. S.) 661.

VERBAL CONTRACTS.—LIMIT OF TIME FOR LIEN.

WHEN the work is done or materials are furnished under a verbal contract, no lien will attach by virtue of the mechanic's lien law unless the work is to be done or materials furnished within one year from the date of the contract. *Harvey & Mose Plumbing Co. vs. Wallace*, 99 Ill. App. 212.

VIOLATION OF BUILDING ORDINANCES.

THE fact that a building in a city is not in all respects erected in strict compliance with the provisions of the ordinances relating to such matters does not deprive the builder of his remedy under the law relating to mechanics' liens, where the written contract is not invalid. *Anderson vs. Carlson*, 99 Ill. App. 514.

WRITTEN AGREEMENT NOT TO FILE LIEN.—BOND.

WHERE a subcontractor furnishes material to a contractor under a written agreement not to file a lien, but before he furnished the material he procured from the contractors a certificate that they had furnished a sufficient bond to guaranty the completion of the building, and the subcontractor did not examine the bond, and made no inquiry as to whether it was available to him, he is not released from his covenant not to file a lien, on the ground that he was induced to waive his right to a lien by representations of the principal contractors that they had given a bond to pay all claims, that such representations were false, that he had relied on them, and did not find out their falsity until the work was done. *Diemer vs. Philadelphia German Protestant Home*, 19 Pa. Super. Ct. 225.

A RESIDENCE AT NUTLEY, N. J.

THE residence which is illustrated on page 96 has been erected for Mr. William A. Lambert, at Nutley, N. J. The underpinning pedestals to the piazza and chimney are built of rock-faced gray stone. The first story is clapboarded and is painted olive green, with bottle-green trimmings, and the second story and gables are covered with shingles and stained a dull shade of moss-green. The roof is covered with shingles and is stained with a similar effect. Dimensions: Front 30 ft. 6 in.; side, 35 ft., not including piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft. The hall is trimmed with oak and is furnished with an ornamental staircase. The parlor and dining-room are trimmed with pine, and the former is treated with old ivory white, and is provided with an open fireplace furnished with tiled facings and hearth, and a mantel of Colonial style. The dining-room is treated natural, and has a bay window and an open fireplace with brick trimmings and mantel. The butler's pantry is fitted with sink, drawers, dressers, and cupboards complete. The kitchen is trimmed with North Carolina pine, and is finished natural. It is provided with an open fireplace for a range, wash trays and all the best modern conveniences.

The second floor is trimmed with North Carolina pine, and contains four bedrooms and a bathroom; the latter being wainscoted and furnished with porcelain fixtures and exposed nickelplated plumbing. There are two bedrooms and ample storage room on the third floor. A cemented cellar contains a furnace and coal bins. Mr. William A. Lambert, architect, 99 Nassau Street, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

MATERIALS OLD AND NEW.

THE value of one material, or of two or more, in external work, says the Building News, is a question of some importance. In stone districts the use of a local stone or granite is universal, and to one used to brick and stucco or timber combined the effect of the buildings all of stone is somewhat monotonous at first. But it must be confessed that a single material like stone or granite produces a sense of unity and harmony that is not found in brick and stone, or with other mixed materials. The buildings seen in Edinburgh, Glasgow, Leeds, and other towns are imposing by their very mass and homogeneity, apart from style, though the Classic styles have been generally favored, inasmuch as large blocks of dressed stone better adapt themselves to Classic detail and horizontal features. The ashlar-faced stone buildings prevalent before brick and stucco came into use are examples.

There is much more breadth in buildings entirely of one material, stone or brick. Directly we introduce a second material this is lost—as, for example, in façades of brick with dressings of stone or terra cotta: a mixture very prevalent and popular. A little stone in window dressings and angle quoins and string-courses brightens a building, till the stone gets covered with a film of soot—a reason why the two materials are so often used together; but there is a desire to be extravagant—to use it in every detail, producing a restless and spotty effect, entirely destroying all breadth.

The subject is one deserving the architect's consideration—whether this cheap source of effect can not be bought too dearly? Frequently a brick building is spoiled by the usual stone dressings: the materials destroy one another—that is to say, we lose the integrity of brickwork altogether. It is better to employ stone sparingly, just to mark the openings and angles, as is done in the old Dutch buildings. Here the walls and gables are of brick, broadly treated, and the stone is confined to courses about two or three bricks high as quoins in long and short alternate courses, and generally separated by three or four courses of brickwork, but irregular. Entrance doorways have entire jambs of hewn stone simply splayed or molded, or the stone blocks and voussoirs are placed at intervals of three or four bricks round the jambs and arches. Strings and band-courses of stone are sometimes introduced, but the effect is broad, and the brickwork is the chief and prevailing material. The stone introduced in recessed and splayed window and door-jambs alternately with bricks between gives a pleasing relief to the openings, and preserves a continuity of the brickwork, which is cut off when the jambs consist of continuous long and short stones without brick intervals between, as we generally adopt here.

When more than one or two materials are used in building, the sense of unity and harmony is destroyed. We have noticed it in brick and stone-dressed buildings when the stone is freely intermixed; but what are we to say of those modern imitation buildings which in-

troduce three or four different materials—brick, stucco, half-timbering, etc.? We can not call them restful buildings. First we have plain red brickwork relieved by terra cotta or stone to the first-floor story, then timberwork and stucco, gables of tile-hanging; so that we get a variety of different wall treatments from the base to the roof. This "Composite" style of architecture is attractive for country and seaside residences, the building amateur and "genteel" residents like the variety, and the architect has to cater for the taste. But it is not the architecture that will endure. It is the least monumental, and as we see it in new residential estates is atrociously unreal and irritating. A more quiet and more honest expression for country localities has been lately developed, devoid of so-called "timberwork." The upper stories are of simple stuccoed brickwork, with close-set bargeboards or tile-hanging, the tile roofs brought just over the walls, and cement-filletted below. They really are a revival of the more modest country houses built during the seventeenth and eighteenth centuries. We believe the craze for sham half-timber work, full of pretense and obtrusiveness as it is, will give place to a more solid and broader use of materials. These instances of their actual use and expression lead us to generalize. Out of all the experiments, ancient and modern, we arrive at the conclusion that material has been chiefly employed—first, to express solidity, as it did in all ancient buildings; second, to express the articulate structure, as it did in the later Medieval buildings; and thirdly, used as a covering or filling-in material, as we now see it used in the American cities, to fill in or case the skeleton steel structure, or to initial another material, as in stucco or tile work. Which of these methods is likely to be employed is a question that must, to a large extent, depend on circumstances. The last method of casing or filling is the one that appears to grow out of our latest modes of construction. It may be real or a mere mode of concealment. It is for the architect to decide which. The second mode of expressing the articulate structure has been also tried, and offers a logical means of expression. The half-timber structure in its best examples illustrated this method. What has been called the "muscular" Gothic was also an exemplification of the mode of using material to display construction.

In the two last methods we must find a means for the proper use of our materials; on the one hand rejecting the restless and irritating expressions of structure, and on the other the disguises and "veneering" which have made so many of our recent buildings ridiculous. As for the first mode, that of making our material express solidity, modern conditions of building have rendered it impossible to employ the large masses of solid stone or granite we see in the old trabeate types of architecture. In this connection we may notice the use of large blocks of concrete for structures of an engineering character—bridges, arches, and piers, which are assuming a masonry character. This reversion to masonry forms appears to be a sort of reaction from the light iron and steel structures, which have been proved costly, and in some instances unreliable.

THE SHAPE OF ROOMS.

THE shape of a room is a very important element in its effect when finally furnished. Long rooms, square rooms, oval rooms, circular boudoirs, each have a distinct quality of their own. It would be going too far to assert that one shape is better than another, but it is at least certain that each shape calls for different treatment, and the effect of the furnished room will be largely dependent upon its dimensions. The location and kind of the windows form other notable features that must be taken into account in household furnishings. A room needs plenty of light, but the position of the windows, their elevation above the floor, the sort of a window it is, whether a bow, a group of lights, or a single opening will help amazingly if it is properly treated.

SAVING STEPS.

A LEAFLET issued in the reading course for farmers' wives, prepared by the College of Agriculture of Cornell University, is entitled "Saving Steps," and embodies the ideas of a practical housekeeper in these words: "When I waken in the morning I do not rise immediately, but I plan the work of the day and study to see how I may save steps and accomplish as much work. I find that if I go about my work thoughtlessly I travel over the same ground several times when it is not necessary. Before I learned to do this I would get up suddenly after awakening and at once feel a sense of hurry, which soon became worry, and before the forenoon was over I was exhausted in my efforts to see how fast I could work. Now, when I feel myself getting anxious, I try to relax mind and body, and the work goes more smoothly and I accomplish more."

New Building Patents

THE following list of New Patents relating to Building and Sanitary Science is prepared expressly for the BUILDING EDITION, by Munn & Co., Solicitors of American and Foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

TILING. G. H. Bennett, New York, N. Y. September 2. 708,194
TILE. A. L. Flood, September 2. 708,470, 708,471, 708,472
BUILDING BLOCK. Searight & Stevens, Union City, Mich. September 2. 708,499

CARPENTRY.

WINDOW FRAME AND SASH. C. L. Wall, Philadelphia, Pa. September 2. 708,430
SWINGING DOOR. H. Meyer, St. Louis, Mo. September 9. 708,966
WINDOW FRAME AND SASH. E. Davey, New Rochelle, N. Y. September 23. 709,666
SLIDING WINDOW. Caritou, Victoria, Australia. September 30. 710,322

CONSTRUCTION.

CEMENT ROOFING. H. Brock, St. Paul, Minn. September 2. 708,307
CONSTRUCTION OF METALLIC FRAME BUILDINGS. C. E. Heberd, Brooklyn, N. Y. September 9. 708,548
METAL WINDOW AND WINDOW FRAME. W. R. Mudd, Cincinnati, Ohio. September 16. 709,237
CONSTRUCTION OF BUILDINGS. C. E. Cottrell, Minneapolis, Minn. September 16. 709,257
SHEET METAL WINDOW FRAME AND SASH. C. B. Schilling, Chicago, Ill. September 23. 709,514

ELEVATORS.

ELEVATOR. L. W. Dexter, San Jose, Cal. September 9. 708,626
ELEVATOR. M. A. Clennan, San Francisco, Cal. September 9. 708,755
ELEVATOR. F. Pulwitt, Springfield, Ill. September 9. 708,830
SAFETY DEVICE FOR ELEVATORS. A. W. Leach, Indianapolis, Ind. September 23. 709,494
ELEVATOR. J. Rice, Chicago, Ill. September 30. 710,007
SAFETY ELEVATOR. F. H. Burgart, Payne, Ohio. September 30. 710,038

FIREPROOFING AND FIRE EXTINGUISHMENT.

FIREPROOF WALL PLASTER. C. R. Harris, Los Angeles, Cal. September 2. 708,353, 708,354
FIREPROOF FLOORING. C. F. Haglin, Minneapolis, Minn. September 9. 708,764
FIREPROOF FLOOR CONSTRUCTION. M. Watson, New York, N. Y. September 30. 710,308
ELECTRICAL RELEASE FOR FIRE DOORS, ETC. H. J. Podlesak, Lincoln, Neb. September 23. 709,607
CHIMNEY OR OTHER CURVED FIREPROOF STRUCTURE. Paul Brandner, Brooklyn, N. Y. September 30. 709,869
FIREPROOF FRAME BUILDING. G. E. Voelkel, Los Angeles, Cal. September 30. 710,307

HARDWARE.

WINDOW FASTENER. L. D. Parks, Gatesville, Texas. September 2. 708,067
DOOR CHECK AND CLOSER. X. Reichlin, Horgen, Switzerland. September 9. 708,586
SASH LOCK. E. P. Armstrong, Colorado Springs, Col. September 9. 708,611
HINGE. A. H. Hesterhagen, Jersey City, N. J. September 9. 708,767
LOCK. G. G. Smith, Florence, Italy. September 16. 709,056
DOOR CATCH. G. G. Smith, Florence, Italy. September 16. 709,057
SASH FASTENER. J. E. Gibbs, Staunton, Va. September 16. 709,148
LOCK. H. W. Elcher, Meyersdale, Pa. September 16. 709,309
WINDOW APPLIANCES. C. E. Bradshaw, Cleveland, Ohio. September 23. 709,532
SASH LOCK. W. Bennett, Waynesboro, Va. September 23. 709,591
WINDOW FASTENING DEVICE. D. Snell, Harmony, Ind. September 23. 709,726

HEATING AND VENTILATION.

VENTILATOR. J. W. Maus, Pacific Junction, Iowa. September 16. 709,230
STOVEPIPE VENTILATOR. F. E. Taft, Jamestown, N. Y. September 23. 708,525
RADIATOR. A. Eichhorn, Orange, N. J. September 23. 709,758
FIREPLACE. G. Vitti, Montclair, N. J. September 30. 710,226

PLUMBING.

WATER CLOSET. F. A. Wells, New York, N. Y. September 2. 708,106
CLOSET FLUSHING DEVICE. J. M. Justen, Toledo, Ohio. September 9. 708,890
WATER CLOSET VALVE. E. G. Watrons, Chicago, Ill. September 30. 710,128
TRAP. J. A. Clukies, St. Louis, Mo., September 30. 709,871
MEANS FOR ATTACHING BOWLS TO THE SLABS OF WASHSTANDS. J. A. Clukies, St. Louis, Mo. September 30. 709,872

TOOLS.

PLANE. L. C. Clark, Southington, Conn. September 2. 708,318
SQUARE. A. L. Lundgren, Pullman, Ill. September 2. 708,376
BEVEL AND SQUARE. A. C. Cullmann, La Crosse, Wis. September 9. 708,533
BEVEL. D. E. Hughes, Espy, Pa. September 23. 709,487
TRY-SQUARE. P. E. Ellenberger, Belvidere, N. J. September 23. 709,759
SAW. W. G. Anderson, Boston, Mass. September 30. 709,857

MISCELLANEOUS.

WALL PLASTER. N. J. Ruggles, Columbus, Ohio. September 9. 708,591
WALL FINISH AND PROCESS FOR MAKING SAME. G. W. Wodicka, St. Louis, Mo. September 16. 709,188

Publishers' Department

A COLD GALVANIZING PROCESS.

By the cold galvanizing process a deposit of pure zinc is made on an article. As the operation is under perfect control, the thickness of the coating can be regulated to any amount desired, and materials and articles of all kinds are given the protection required when subjected to use or exposure of any sort. The applicability of the process obtains a wide range, as everything from fine tools and springs to the heaviest patterns of structural iron can be readily and completely treated without waste or breakage. The coating deposited is absolutely adherent, entering the pores of metal and amalgamating with it, and sheet metal, rods, wire, and similar articles can be bent, folded, twisted, or manipulated in any way without injury to the galvanizing. The deposit is smooth and perfectly uniform, so that the surface treated remains unchanged, all designs retain their original forms, all openings and outlines are preserved, the elasticity and temper of springs are not affected, and no recutting is required on bolts, screws, nuts, fittings, or any other threaded pieces. The deposit forms an excellent base for other plating, such as copper, nickel, silver, gold, etc., for the purpose of preventing rust on objects so treated. By properly laying out a plant, the process can be made continuous, and almost automatic, and without loss of time, as articles can go direct from the cleaning tanks into the galvanizing tank without preparatory heating. The operation can be stopped at any time, and for any length of time, without injury to the solution, and it can be started again at a moment's notice when wanted. The process is well adapted to things having movable parts, as no parts are soldered together, and the free action of the parts is not interfered with in any degree. Articles as small as fine tacks can be treated without any difficulty and without sticking together. Artistic metal work of the most delicate nature, as well as girders of the largest dimensions, receives the solution equally well. Paint adheres to any object treated, and, by the proper kind of solder, galvanized iron sheets can be soldered together as readily as tin plates. This cold process of the United States Electro-Galvanizing Company, 346 Broadway, New York city, is used by many of the most important industries in the country, and by the United States Government.

ROOFING TIN.

THE Cortright Metal Roofing Company, of 50 North Twenty-third Street, Philadelphia, Pa., with Western office at 134 Van Buren Street, Chicago, Ill., has recently added a large kettle or tank for galvanizing its "Metal Slates" and "Victoria Shingles." In many parts of the country these goods are very popular, because they require no paint to preserve them. This company's method is to take the slates or shingles, which are stamped out of roofing tin or terne plate, and, after stamping, to galvanize them, which process insures a thorough coating and leaves no raw or cracked edges exposed. In order to better understand the excellence of these articles, architects, contractors, roofers, and intending builders may send to the Cortright Company for samples, which will be furnished *gratis*. The company manufactures at its factory in Philadelphia other metal tiles, metal slates,

ornamental shingles, ridge-copings, hip-coverings, valleys, etc., of various sizes and styles, to meet the needs of all builders.

ART MODELING.

IN addition to the great variety of art modeling done by Mr. N. H. Nowak, of Camden, N. J., this head of the works superintends installations of art fixings in buildings, and sells goods of many designs kept in stock. Models and dies are there made for stamping, illustrating, photoengraving, advertising signs, ornaments, statuary, ceilings, centers, towers, brackets, medallions, garlands, etc., and metal ceilings, relief signs, letters, metal statuary, composition letters, artistic metal, monuments, and signs for advertising are sold. Mr. Nowak has had a large experience with some leading firms in Europe and the United States; has erected a large number of statues, and has modeled work and directed the placing of it in position in the interiors of many churches. A beautiful and important execution of this interior work may be seen



TWO MONUMENTAL DESIGNS BY MR. N. H. NOWAK.

in the Seminary Chapel at Quebec, Canada, where the metal finish of the pillars and capitals, the balcony rails and arch, all of which were made from galvanized sheet steel and zinc, are from designs of Mr. Nowak's, who also superintended the final work in the interior. The making of all kinds of models, dies, and composition work is increasing in this country, and foreign demands for our artistic work in this line are encouraging. We illustrate herewith two monumental figures made of galvano bronze. The order for one

moldings. Among the new designs executed by the Foster-Munger Co., is a Moorish grille, a special stairway, a beautiful wood carpet, and a fancy hardwood floor, all handsomely illustrated in the catalogue. The company also show a complete line of paints, varnishes, etc., builder's hardware, carpenter's hardware, and wire window guards. This book is a comprehensive guide and reference to manufacturers, dealers, builders, architects and all interested in the building trade, and is sent free, postage paid, to any dealer or maker of these goods throughout the country; to any one who may intend building (in the matter of selecting designs, etc.), it will be sent upon receipt of 20 cents to cover postage. The address of the Foster-Munger Co., West Twentieth and Sangamon Streets, Chicago, Ill.



ORNAMENTAL CEILING.

of these figures came from Sydney, New South Wales. At the works the experts in designing and making dies are busy filling orders for ceilings and ornamental stampers. The representation of a part of an ornamental ceiling is here shown. The Art Modeling Works are at 832 Market Street, Camden, N. J.

A NEW COLOR CHART.

AN ingenious card device, for displaying the colors of Dixon's Silica-Graphite Paint in such a manner as will permit of an exact idea of each color is being issued by the Joseph Dixon Crucible Company. The color chart carries with it suggestions as to the class of construction that can be protected with this paint, also instructions as to the best methods of applying protective paint. Dixon's "Silica-Graphite Paint" is adapted for coating tin or shingle roofs and iron-work, and it is claimed that tin roofs well treated by this compound have not required repainting for ten to fifteen years. The new color chart and a paint circular may be secured by request to the Joseph Dixon Crucible Company, Jersey City, N. J.

DOORS, BLINDS, WINDOWS, MOLDINGS, ETC.

THE Foster-Munger Co., of Chicago, has published a catalogue so complete and of such considerable interest that it might be fairly denominated a book. Dealers in sashes and doors, contractors, architects and parties contemplating the making of alterations or repairs, will find the catalogue of great advantage through its presentation of new features, one of which is the introduction of a method of selling house plans; that is, finished plans, specifications and details for houses of different estimated cost; and offering suggestions to contemplating home builders. The lists of sashes, doors, blinds, and moldings, and with them designs and information in reference to all kinds of building material, exterior and interior work, including sliding and Venetian blinds, wood and iron front stores, veneered hardwood doors, interior trim for doors and windows, Colonial columns, porch work, designs of porches, brackets, exterior sawed and turned work, stairway designs, newels, balusters, etc., form an important part of this large book of 750 pages. There are also lists of hardwood mantels, modern styles of grilles and fretwork, wood carpets, fancy hardwood floors, church windows in colors, leaded art glass, bevel plates and fancy lights, church seats and pew ends, composition work for interior decorations, caps, pilasters, stairwork, frames, turned work and fancy

SUBSTITUTE FOR VARNISH.—A substitute for varnish is produced, according to Ammundsen, by adding to 100 parts of caseine, 10 to 25 parts of a 1 to 10 per cent. soap solution and then 20 to 25 parts of slaked lime. The mixture is carefully kneaded until a perfectly homogeneous mass results. Then gradually add 25 to 40 parts of turpentine oil and sufficient water for the mass to assume the consistency of varnish. If it is desired to preserve it for some time a little ammonia is added so that the caseine-lime does not separate. The surrogate is considerably cheaper than varnish, and dries so quickly that paint ground with it may be applied twice in quick succession.—Chemiker Zeitung.

MODERN BATHROOMS.

THE bathroom of to-day is deserving of as much attention as almost any other part of the house. Aside from the importance of employing the best of plumbing, another consideration of highest prominence is the choice and arrangement of details so as to produce a harmonious and artistic effect.

A complete list of all the necessary furnishings may be found in a fine catalogue issued by the Standard Sanitary Manufacturing Co., of Pittsburg, Pa. This catalogue gives many suggestions about plumbing which will be found valuable to builders or those about to remodel present dwellings. The articles that make a complete bathroom outfit of the finest grade of the Standard Company's installation are as follows: 1. The porcelain enameled "Albion" pattern bathtub, rolled rim, nickelplated bell supply fittings with imperial waste. 2. The nickelplated combination shower and needle bath, with liver sprays, thermometer and rubber curtain, and porcelain enameled receptor. 3. The porcelain enameled plate sitz tub, with rolled rim and



COMPLETE BATHROOM DESIGN IN PORCELAIN ENAMELED WARE.

extension arm on the sides, nickelplated combination, fine valve bell supply and waste fittings, including bell supply liver spray, and bidet and imperial waste. 4. The porcelain enameled plate foot-tub, with rolled rim, and nickelplated bell supply fittings with imperial waste. (All the above tubs are exterior finished in zinc white with plate 409 M "Empire" border.) 5. The lavatory of Mexican onyx, with scroll pillars and shelf, decorated vitro porcelain basin, nickel-plated offset legs, and supply and waste fittings with onyx handles. 6. The closet porcelain enameled plate "Delecto" pattern bowl, mahogany saddle seat and panel cover, and conical tank with onyx top; nickel-plated supply pipe with air chamber and stop, and paperholder. 7. The miscellaneous trimmings complete this design. Another design number, consisting of porcelain enameled bathtub, lavatory, closet and trimmings, plain and desirable, may be put in at about one-eighth the cost of the elaborate set first described. The company also make the "Standard" porcelain enameled kitchen or pantry sink with concealed galvanized air chambers, the porcelain enameled laundry tubs in one piece, without seams or joints, and a long list of miscellaneous bath trimmings and plumbing goods. The general offices and showrooms are in Pittsburg, the six factories are in as many cities, the branch offices and salesrooms are in six cities, including London, England, and branch offices at Chicago, Montreal, Boston, and in New York City, at 81 Fulton Street.

HOW TO EARN MORE.

THE average man or woman working for a living does not look favorably on the idea of studying during even a portion of his or her spare time at home. But, then, it is not the average young man or woman who rises to the top of his or her chosen profession or calling. Nevertheless, it is a fact that even average young men and women can be fitted for much higher positions than they now occupy if they will study during some of their spare time, under the direction of a good correspondence school, like the Consolidated Schools in New York. This institution in the great metropolis daily teaches thousands of men and women, old and young, what they should know of the business in which they wish to excel in order to earn not merely a living, but to earn wages or salaries that amount to a great deal more than a living, and that, too, without taking a minute from the student's working time.

Ten years of experience has secured to the Consolidated Schools the development of a system of teaching by correspondence that is far superior to the older methods, inasmuch as it enables them to give each separate student individual instruction, thus making the tuition far more valuable to him than that which he receives in classrooms or by older methods

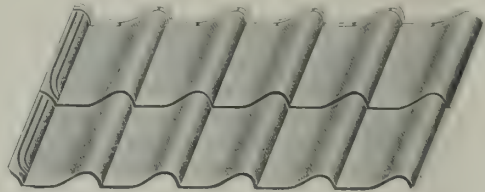
of correspondence instruction. Briefly, their plan of teaching is this: When an applicant has selected that one of the many courses offered by the schools which suits his requirements, and has forwarded his application, he receives the first text-book in his course. These text-books are written by the instructors of the schools, who are men with long practical experience in their respective fields, besides having the necessary technical training, so they are well qualified to assist the students in their daily work, and help them advance in their chosen calling. Before being published, the text-books are revised by eminent experts in the various branches.

When the student receives his text-book he starts in at the beginning and studies until he comes to the first "examination" given in the book. He then answers the questions and works the examples in the examination, sending the result of his labor to the schools for correction. When the work is received, an instructor carefully examines it, corrects it if necessary and writes the student a letter explaining to him more particularly the points on which the student's knowledge appears to be weak. The text-books are written in simple language, and all technical terms are carefully explained. But should a student at any time find difficulty in understanding any part of his work, he has the privilege of writing to the schools for special information on the point that troubles him. When a request of this nature is received by the schools, it is referred to an instructor, who writes the student a personal letter, giving him such additional information as will enable him to clearly understand the point about which he wrote to the schools. Great care has been given to the preparation of the text-books used by the Consolidated Schools. Each book leads gradually up to the next, so that all the text-books on any one course form a complete series, progressing from the most simple subjects to the more advanced ones by almost imperceptible steps. When a student sends in his work on the next to the last examination in the subject which he is studying, he receives from the schools his next text-book, so that he has something to study when he has sent in his work on the last examination. In this way the student is kept constantly supplied with employment, and is thus enabled to advance as rapidly as his time and ability permit. He is really a class by himself, and is not hampered in his progress by students who are not as bright as he, nor forced forward by those who are able to devote more time to their studies. After completing his course, the student receives a diploma and a duplicate set of the instruction papers of his course, revised up to the date of his graduation so as to include the matter which progress has brought forth in the various subjects since he studied them. These books are handsomely bound and indexed, and form a reference library worth many times the tuition fee charged for instruction. In fact, the fees charged by these schools are so small, and the plan of payment is so easy, that almost anybody can afford to study. Hardly any previous education is required. A fair knowledge of reading and writing is all that is necessary, and, if required, the schools may even improve the student's knowledge of reading and writing.

The courses that will probably interest readers of the BUILDING MONTHLY more than others are those on architecture and architectural designing. These series are taught in an admirable manner, the instruction being thorough, practical, and up-to-date. Besides the architectural courses, the schools teach electrical, me-

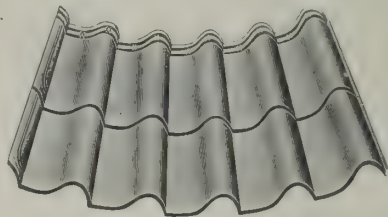
RAINFOOF ROOFS.

RAINFOOF roofs can be secured by the use of Berger's metal tiles of the Spanish pattern. These tiles revive the rich and picturesque effects of the old time tile roofing, while their constructive features are strictly modern. They are made of copper, galvanized iron, painted steel or tin, as may be preferred, and are stamped, as shown in the cut, in sheets of ten tiles



STRAIGHT ROOF SHEET.

each, making fewer joints and a less number of pieces to handle. This renders their application rapid and economical, and there is less liability, the manufacturers claim, of leakage, and the roof is more secure. The tiles have a vertical double side guard and a double top guard, overcoming capillary attraction, and effectually shedding the water. The tiles are artistic in appearance, light in weight, watertight, stormproof and waterproof. They require no special roof framing, do not break, split or chip off, and in every way are suitable to the requirements of a variable climate. The weight is said to be only two-fifths of that of slate roofing, or one-quarter that of terra cotta tiles, hence heavy roof timbers are not requisite. In addition to the regular patterns for straight roofs, Berger's Spanish tiles are made in graduated form for turrets, towers and conical surfaces, a view of a ten tile plate being shown in the illustration. The tiles for straight roofs are made in



GRADUATED FORM SHEET.

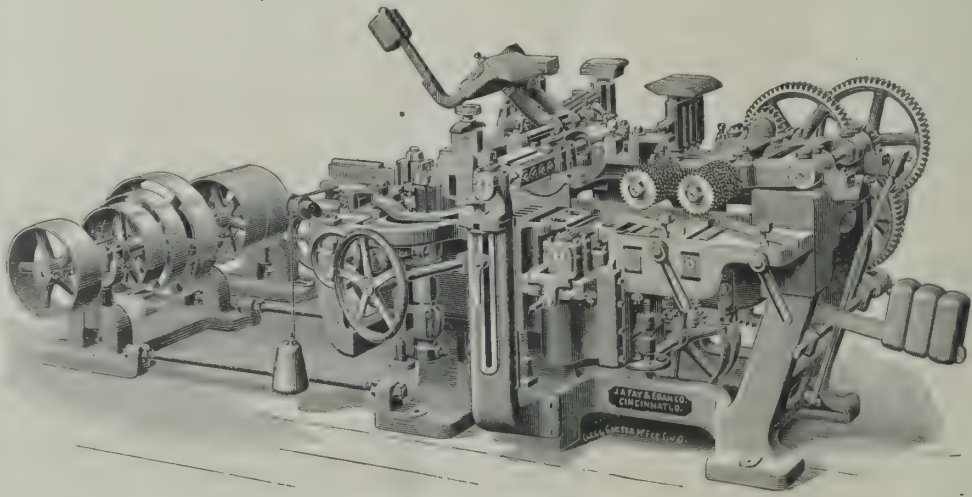
two sizes, as are also the graduated type. The company has issued an attractive folder, fully describing the tiles, and it will be sent on request. Address the Berger Manufacturing Co., Canton, Ohio.

A FOUR-SIDED MOLDER.

THE accompanying illustration shows an improved molder adapted for general work, and is the result of the aim of the makers to produce a machine that would satisfactorily perform the most particular requirements. The following points in its construction will recommend it to those who want a strictly first-class apparatus for fine molding:

The lower head cuts first; the table at the feeding in end is independently adjustable; the upper feed rolls are driven downward; all pressure bars can instantly be thrown back to give access to the heads; the lower head and its bearings draw out endwise for setting and sharpening the knives, and the countershaft is at the feeding end of the machine, on account of which there is no rubbing or cutting of the belts.

The molder is made in sizes to work from seven to ten inches wide and to ten inches thick; the feed

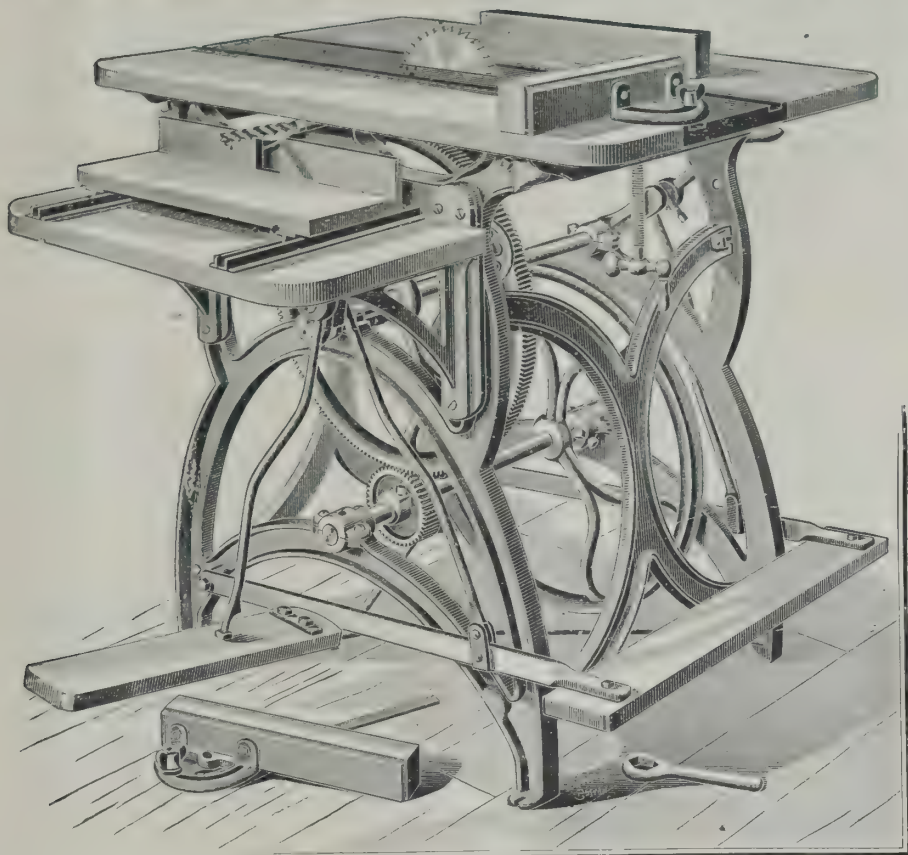


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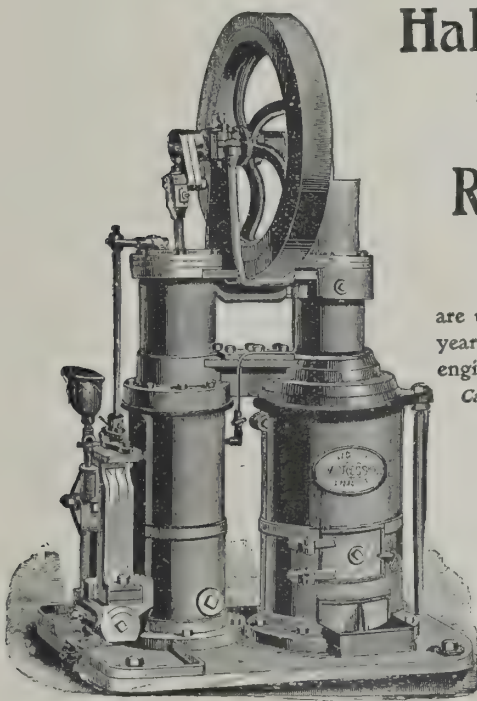
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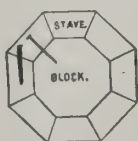
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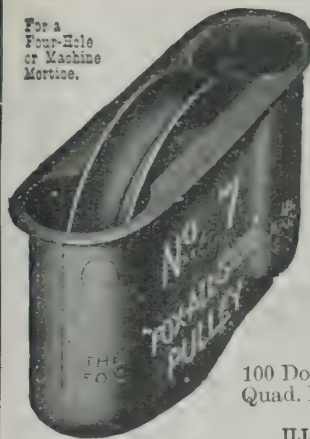


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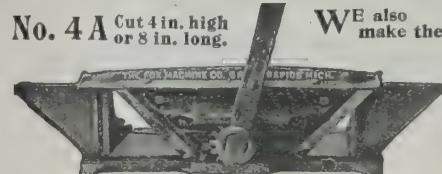
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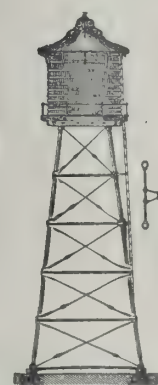
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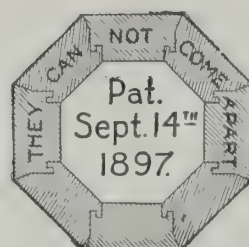
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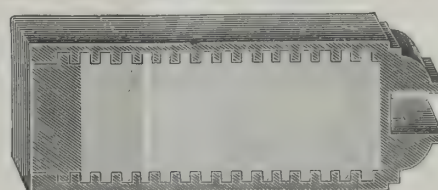
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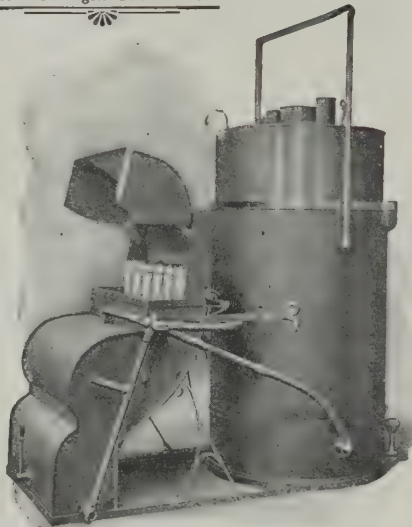
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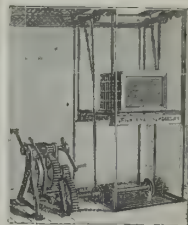
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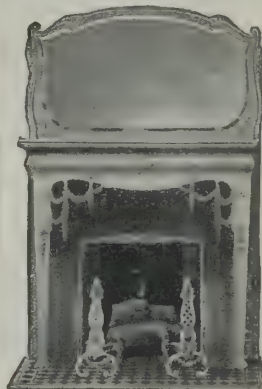
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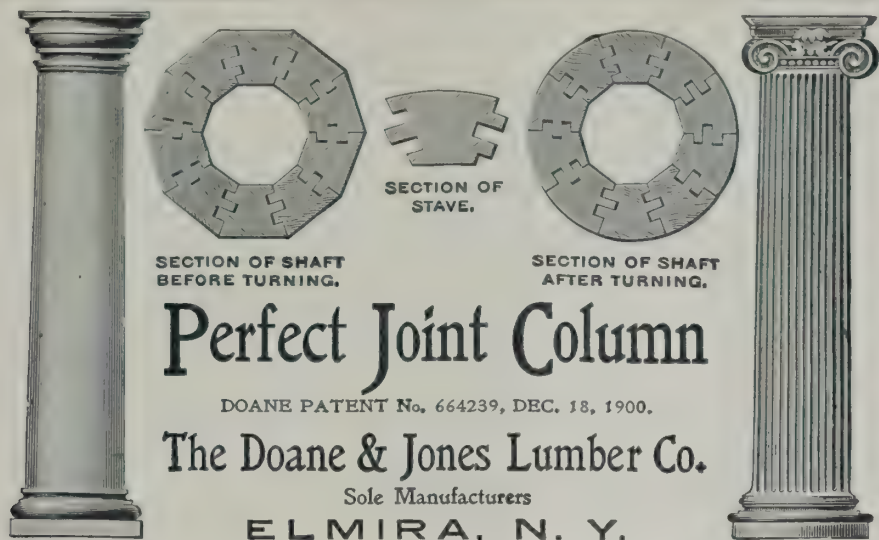
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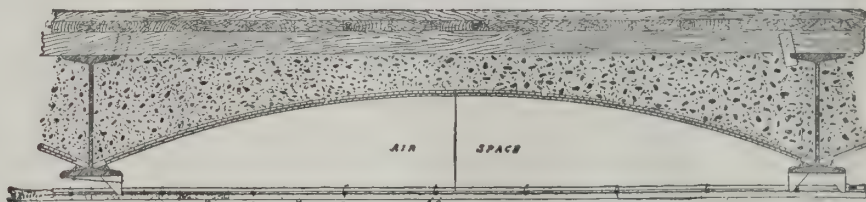
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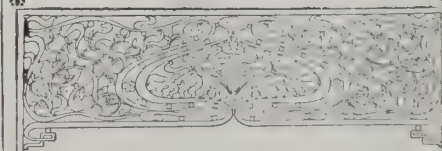
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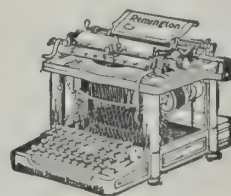


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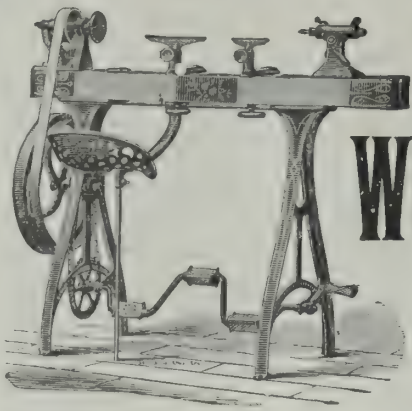
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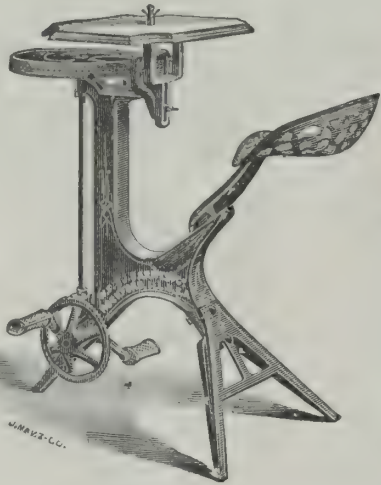
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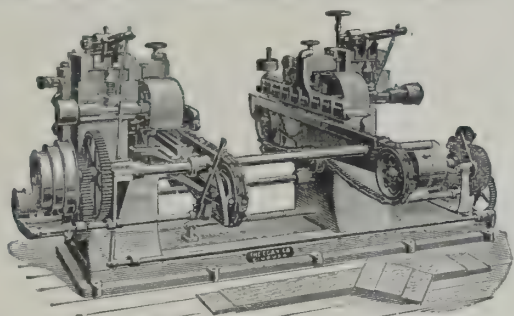
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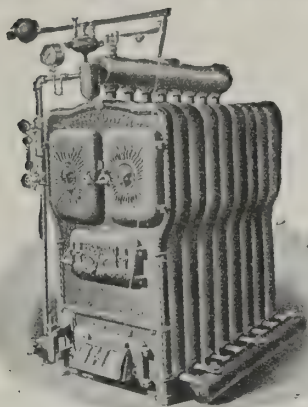
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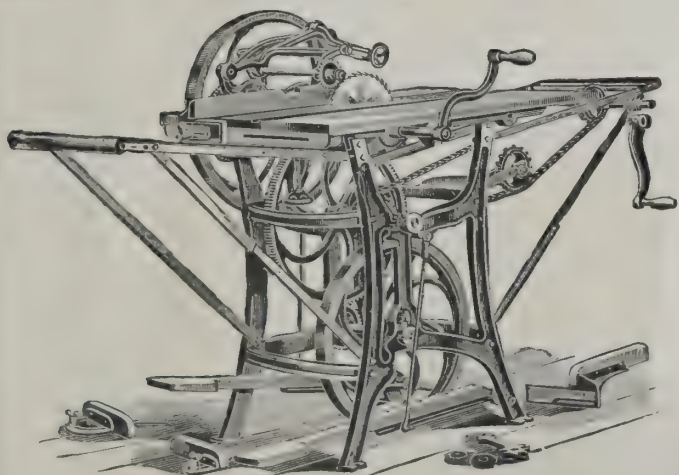
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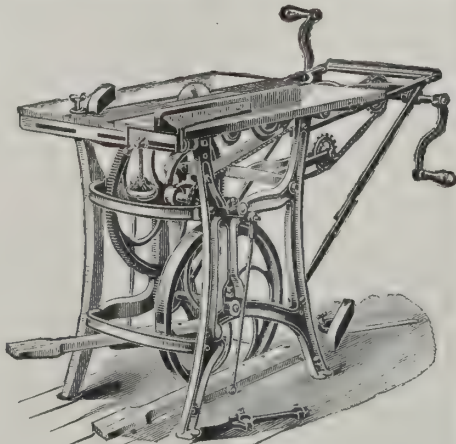
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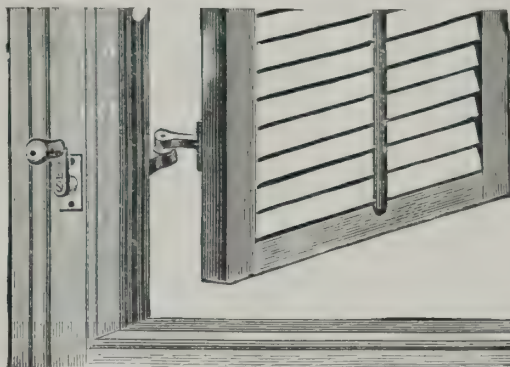
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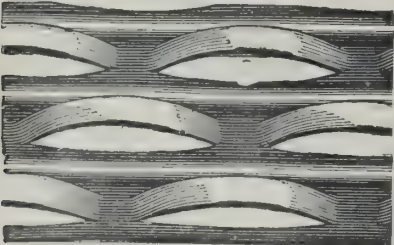
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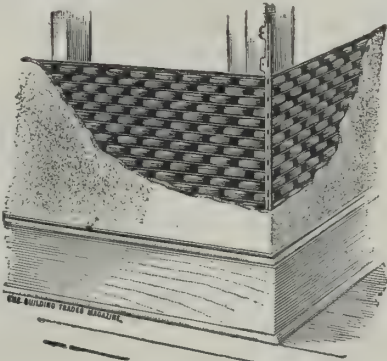
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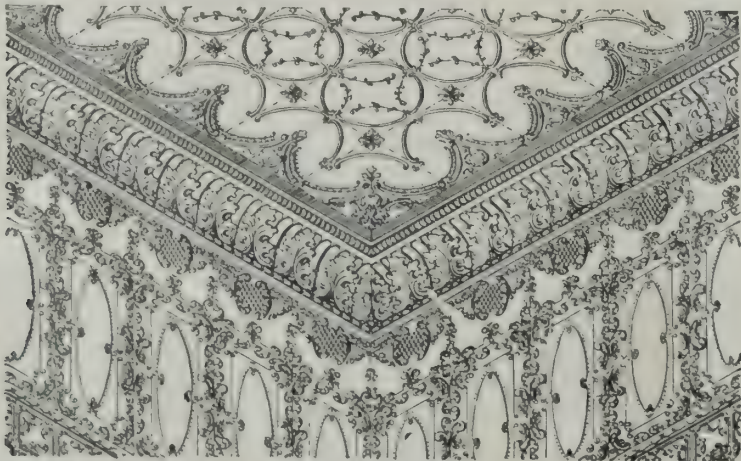
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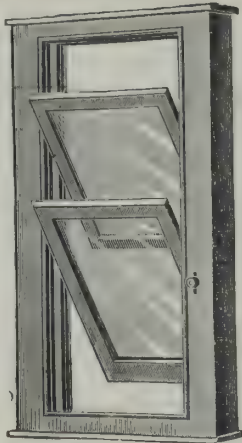
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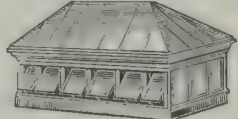
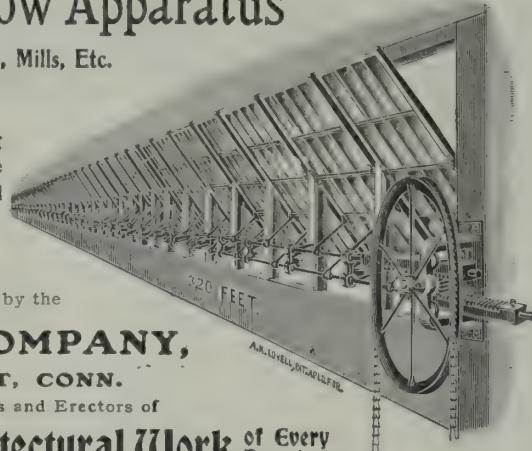
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Building Monthly.



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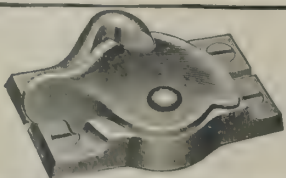


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MR. C. P. H. GILBERT, ARCHITECT.

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MONTHLY COMMENT.

Is the city house as an individual structure on the verge of extinction? Surely not in Boston, Philadelphia, Chicago, Cincinnati and a host of lesser American cities; but its end may soon be reached in New York. But the conditions in New York are happily exceptional. Nowhere else is so large a city placed on so restricted an area and which is so difficult to connect with its adjacent territory. Paris grew naturally from the little island in the Seine, because the surrounding rivers were narrow and easily bridged. New York has not yet found a way of connecting itself with the main land on the west; and its direct easterly connection with Long Island is as yet limited to a single bridge. Meanwhile the elder city of New York has grown in strides and bounds. People crowd into it from all parts of the country; foreign immigrants remain in it because it is the port of entry and they perhaps know no other place to go to. Land rises to fabulous values. Old buildings are demolished to make way for new ones which are so costly themselves that it almost seems they must perish from lack of tenants. But the demand for accommodation is so great, for living purposes, for offices, for manufactories, that people appear willing and able to pay almost any price that is demanded of them. Apartments renting for \$10,000.00 or more per year are now quite common, and the man who possesses a cellar—since that implies an individual house—is well nigh entitled to count himself one of the elect. It is no wonder that under these circumstances the individual house is disappearing from the island of Manhattan. It is a striking fact that only the very rich and the very poor can now afford to live in New York; the former because they alone possess the means of owning or renting an individual house or paying the enormous sums asked for apartments in high grade apartment houses; the latter because they only can content themselves with the miserable accommodations provided by the wretched tenements which still encumber a good deal of valuable ground area.

Meanwhile it is a notable sign of the time that the area of Manhattan has been vastly increased by the erection of large office buildings, gigantic hotels, and vast apartment houses. No sooner is one great structure completed than a new one, still larger, is begun, perhaps immediately beside it. The height of office buildings has risen from ten stories, which was thought a desirable height a few years ago, to sixteen, to twenty, and even to more. The "skyscraper" of to-day is many stories higher than its predecessor of a few years ago. Thus the area of the city is increased, more people are accommodated, greater comforts are provided for those able to pay the price, and yet the basic area of the city is still the same. There is no real extension and there is absolutely no expansion. The streets are more crowded, communication is more difficult, rents are higher. And still, it is said, landlords are not happy and investors in buildings are figuring on the meager returns for their outlays.

It can not be too often insisted upon that the artistic value of any community depends on all the elements which enter into its making. It is not sufficient to have handsome houses; the place itself must be well laid out. The streets must be pleasant to see and convenient of access. The roadbeds must be well made, the pavements or sidewalks of good quality, and the whole lined with trees. The houses should have good gardens, if it is a suburban locality, and the lawns and fences—if they be needed—kept in good condition. The place must give evidence of intelligent cooperation and lively interest in its externals as a whole or it will fail in final results. Each year more and more attention is given to these matters, but public interest in them must not be lessened for a moment.

HOW THE HOUSEHOLDER HELPS THE HOUSE.

THE part the architect takes in the making of the home by the care he lavishes upon the construction of the house is the starting point in all home building. Homes and houses have, it is true, been erected without the immediate help of the architect; but if the architect is considered merely as the designer—and he is much more than that—it will be conceded that, at some point in the process, the house was designed; perhaps not completely, but its form and plan at least indicated. The man who performs this work, whether he be an architect, a builder, a carpenter or a craftsman of any sort, sets the keynote to the home by designing, arranging, planning, erecting the house.

But the part the householder plays—the persons who live in the house, whose lives are moulded by it, whose whims and fancies are apparent in every room and perhaps on every wall—that part is likewise weighty and of an importance so great as to rightly rank with that taken by the architect.

It is a fact often regretted that an antagonism is frequently developed between the architect—the man who builds the house, and the householder—the man who is to live in it. There are two general policies to be pursued in building a house; to have positive ideas, which are well expressed, which rest on a sound foundation and which have reason behind them; or to trust altogether to the architect, giving him general directions, and leaving him in peace until he is ready to turn the house over to the owner. There is a third condition which arises, where the owner knows little, has few ideas, hardly is aware what he wishes, and is continually bothering the architect with impossible suggestions and extraordinary wants. Most houses are built under the last conditions; a few are erected under those first described, and hardly any under the second system.

Now it is obvious that all three ways can not be equally desirable or helpful to the structure they are intended to benefit. Each system is diametrically opposed to each other system. If one way is right the others must be wrong. And it is obvious that they can not all be right, it is quite impossible to reconcile these methods the one with the other; but it is not impossible to consider the problem in such a way as to evolve from the study some suggestions helpful to the householder.

Every architect will eagerly proclaim his complete fitness, competency and ability to design and erect any kind of a house in any kind of a style, in any place, on any site, and at any cost, if he is but given the amount of money that may be spent on it. He need not be approached or disturbed during the operation. Supply him with funds, tell him as briefly as you can what he wants, leave him alone, and await results! That is the architect's ideal way of building a house.

On the other hand the householder, if he be building his own house, will emphatically set forth the fact that it is his money that is being spent, that he proposes to live in the house, that it must suit him exactly in every particular, and that he will personally assure himself that his wishes are being complied

with by watching the architect at every opportunity, and checking up his doings as they are done. That may not be the ideal way from the householder's point of view; but it is the method he would like to pursue and which many times he imagines he is following.

Not very much can be accomplished when two persons are engaged on the same work and antagonism is developed between them. That is what happens when the householder is distrustful of the architect, or when the architect is distrustful of the householder. The remedy lies in the householder's own hands, and consists in cultivating an intelligent appreciation of architecture, of house building in general, and of his own house in particular.

Granted that the money to be spent on the house is the householder's; granted that he is to live in it; granted that he has some ideas he wants carried out; the fact remains that he is unable to execute them, unable to perform the work himself, unable to do anything toward it. Therefore he engages an architect to translate his ideas into actuality, and he does that because the architect knows his trade, and, if he be a good architect, knows it thoroughly.

The householder is, therefore, dependent in many ways on the architect or on the person, whether he be architect, builder, or carpenter whom he employs to erect his house for him. But this is an honorable dependence and in itself should not be an occasion for antagonism or dissatisfaction. It is simply the employment of expert knowledge for work that requires expert direction.

But the householder can help the home building project in many ways by familiarizing himself with the real nature of house building. To build a house, even in the most perfunctory manner, is a complicated process, calling for intelligent treatment of many problems and necessitating familiarity with many differing questions. It is a work not lightly to be gone into. To draw a plan, to apportion the space, to provide for walls, halls, stairs, windows, doors is a much more difficult matter than seems apparent at first sight. And if the floor plan can not be drawn, how much more difficult must it be to conceive of the house as a whole, to picture the relationship of the various parts, to realize the values of shades, of projections, of windows—of a thousand questions the architect considers as matters of course and as things well within his ordinary daily practise!

The householder needs to prepare for house building much in the same spirit that one would prepare for a civil service examination. There is so much to learn that the first lesson will be that there is so little time in which to learn it. He should study houses, he should familiarize himself with actual constructions, he should know what are the latest devices that help toward bettering home life, that help most in sanitation, that help the housework in adding conveniences. He should know something of the relationship of site, sun, and wind to the house. And he will find it a very good exercise to try giving visual expression to his ideas by committing them to paper—not as designs, but as guides to further study and thought.

And then there is the form of the house, its architectural treatment, its external aspect; and then the finishing of the interior with the many problems it entails. And perhaps after that the idea of a garden and the immediate surroundings of the building will present themselves. The more light one sees, the darker it grows. The more one develops the problem, the more difficult the solution. The harder one studies, the less, it seems, one learns. And perhaps, in the end, the whole burden is rushed to the architect and placed exactly where it belongs.

The best results in house building are obtained where there is intelligent co-operation between the architect and the householder. It is thoroughly right that the latter should have ideas, views, opinions; it indicates a healthy interest and testifies to real appreciation. On the other hand unless the householder meets the architect as a helper, unless he is willing to defer to him, unless he is willing to aid him, and unless both view each other with respect, each trying to help the other, each working toward a common end—unless that is done the result will be anything but desirable, and the householder will emerge from his architectural experience with a woeful distaste of architecture and of all things pertaining thereto.

That is a wholly unnecessary result. It is deplorable in itself and the result of wrong ideas wrongly applied. To build a house does not necessarily involve quarrels with one's architect or dissatisfaction with one's self. But one or the other, and perhaps both of these ends, will be achieved unless the house is begun in a spirit of conciliation. If the householder will attack the problem in an intelligent spirit, full of hopefulness in the projected result, keenly alive to the real nature of the questions involved in house building, appreciative of his architect, and as ready to receive suggestions as well as to give them, the possibilities of success are very real and almost certain.

TALKS WITH ARCHITECTS

MR. PERCY GRIFFIN ON SMALL HOUSES.

MR. PERCY GRIFFIN is an architect who has achieved a very marked success as a designer and builder of houses both for the country and city. One of his earliest successes was in designing the houses for "Homewood," a model suburban settlement inaugurated a few years ago, and which is to-day one of the most notable settlements of its kind within the limits of New York City.

"One does not need to be told much concerning the housing problem of New York," said Mr. Griffin. "Everybody knows it exists, hundreds of thousands of people feel its pressure in seeking and maintaining a habitation of their own; the reality need not be discussed, I take it. It is more to the point to know what has been done."

"I know that very well," I replied, "and I am also aware—externally aware—of some of the efforts that have been made to transform unproductive real estate into productive. And very remarkable some of these experiments have been. We are not talking about the higher class districts, in which houses costing from \$5,000 to \$15,000 or more have been built: these belong by themselves; but I want to ask about some of the less expensive efforts which appeal to a larger number of people and which may, in a measure, actually accomplish something in the way of better houses for persons of moderate means."

"That is just what we tried to accomplish at 'Homewood,'" returned Mr. Griffin. "It was a settlement undertaken by the City and Suburban Homes Company, a corporation which, while interesting philanthropists in its work, presented a practical business problem, has conducted its affairs on a business basis,

able property, well in the suburbs, on account of the high prices demanded for land in nearby districts, and conveniently situated as regards lines of transportation. In the present case 530 city lots were secured, lying between Ovington Avenue and Seventy-fourth Street, and fronting on both sides of Seventeenth Avenue, in Brooklyn. Every one having the smallest acquaintance with this locality knows that it is entirely suburban, is pleasantly situated, and is readily accessible. It seemed to require only proper development and houses of the right sort to be immediately successful, and this very soon proved to be the case.

"Work was begun with those necessary street and grading improvements without which no suburban property can attract either investors or residents. These improvements included macadamized streets, granite block gutters, bluestone curbs, carefully laid sidewalks, rows of shade trees and a uniform stretch



THE GARDEN STEPS—RESIDENCE OF C. OLIVER ISELIN, ESQ., NEW ROCHELLE, N. Y.—See page 123.

"That," I interjected, "is what was done at 'Homewood.'"

"In a suburban way," was the quick response. "The housing problem in New York has, to my mind, two aspects; one concerned with the heart of the city, or with tenement houses; and the other with the building of the suburbs, or building in the suburbs in such a way as to attract desirable people to small, well built, well planned and conveniently situated houses, erected at as a low cost as is commensurate with good workmanship and general availability.

"These were some of the problems whose solution was attempted at 'Homewood.' Surely every resident of Brooklyn, if not of the old city of New York, is aware of the immense extent of unoccupied lands within Brooklyn limits, now chiefly used for farming purposes, and only awaiting the investor with a fat pocketbook and a long head to cover them with dwelling houses."

and has achieved the success that all sound business ideas must win in the end. This corporation now owns property within the built-up portions of the city and has undertaken the erection of several model tenement houses; but 'Homewood' was its first enterprise, and stands quite apart among the many experiments in the housing problem.

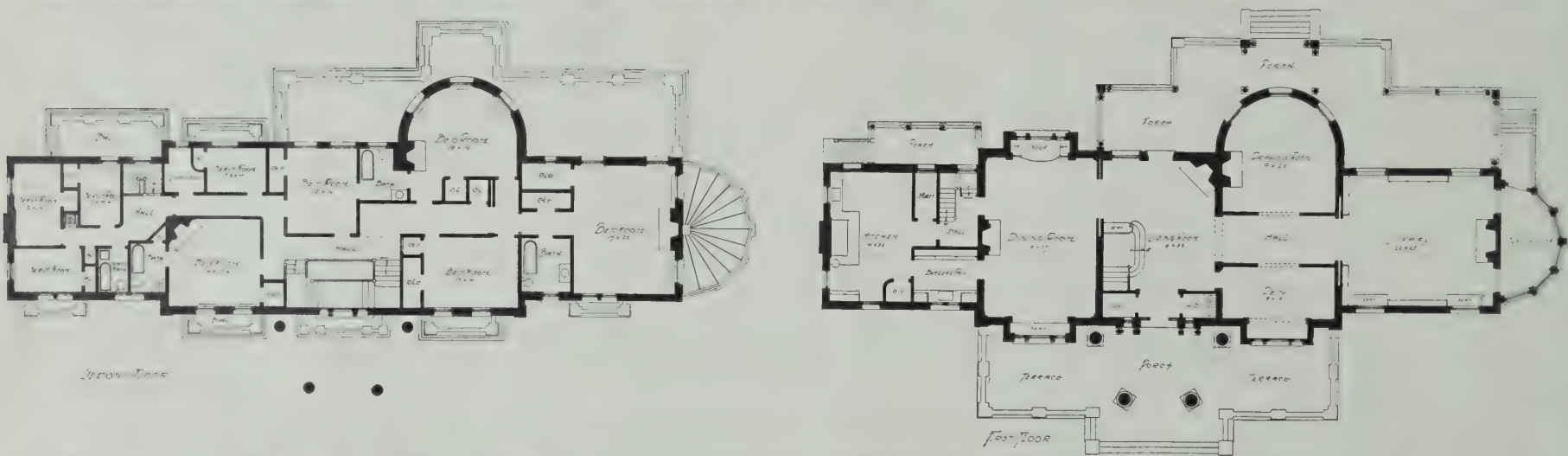
"'Homewood' was not proposed as a place for very poor people or for those living in even the better class of tenements. It does not seek to relieve the tenement house district in any way; but it does seek to provide homes for people of moderate means. People of this class are very numerous in New York and are among the most difficult to house properly. The tenements are beneath them; the individual house is above them. Until 'Homewood' was created there was no place in the whole of New York that could be said to be entirely suited to their means.

"The plan involved the acquirement of a consider-

of fifteen feet of lawn before each house on each side of the streets and avenue. Col. Waring's device of sewage purification by filtration was adopted in the absence of city sewers, and gas and water were supplied. All these matters came under the head of the engineering department, and were carried out with every possible dispatch.

Meanwhile the architectural department, if I may so call it, was busy with the houses. The company's aim, as I have already told you, was to secure dwellings of moderate cost; and at the same time of the highest architectural standard compatible with the cost. It was recognized that there would be calls for dwellings of varying size and price, and an earnest effort was made to meet all reasonable requirements. Several types of houses were proposed, some quite small, others a little larger, and others of fair average size. Yet there was to be nothing extravagant, there

(Continued on page 121.)

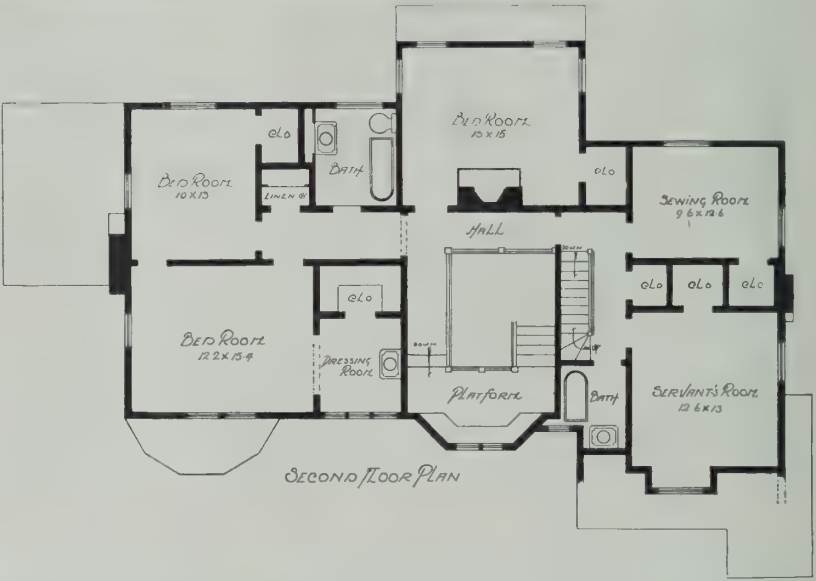
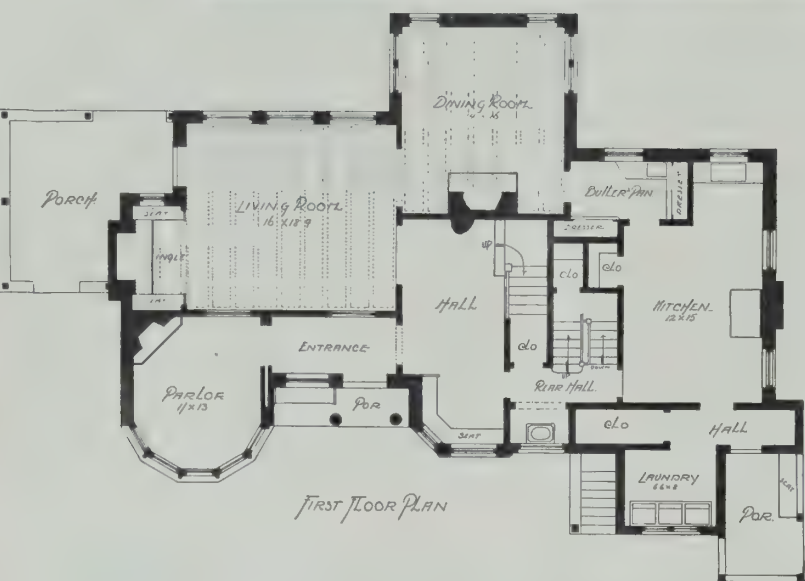


A RESIDENCE AT ELIZABETH, N. J.—See page 122.
MR. C. P. H. GILBERT, ARCHITECT.



A RESIDENCE AT ELIZABETH, N. J.—See page 122.

MR. C. P. H. GILBERT, ARCHITECT.



AN ENGLISH RESIDENCE AT GLEN RIDGE, N. J.—See page 123.
MR. FREDERICK A. JAERSCHKY, ARCHITECT.



FIREPLACE AND WINDOW IN THE RESIDENCE OF WM. HALL, JR., AT SUMMIT, N. J.—See page 122.

MR. WILBUR S. KNOWLES, ARCHITECT.



WINDOW-SEAT AND BOOKCASES IN THE LIBRARY, RESIDENCE OF MR. TOOTLE, MACKINAC ISLAND, MICH.—See page 122.

MR. A. W. BUCKLEY, ARCHITECT.



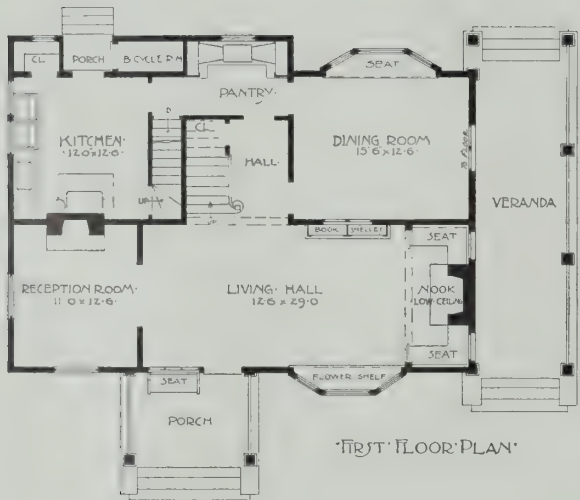
THE GARDENS—"ALL VIEW," RESIDENCE OF C. OLIVER ISELIN, ESQ., AT NEW ROCHELLE, N. Y.—See page 123.

MR. SYDNEY STRATTON, ARCHITECT.



THE GARDENS—"ALL VIEW," RESIDENCE OF C. OLIVER ISELIN, ESQ., AT NEW ROCHELLE, N. Y.—See page 123.

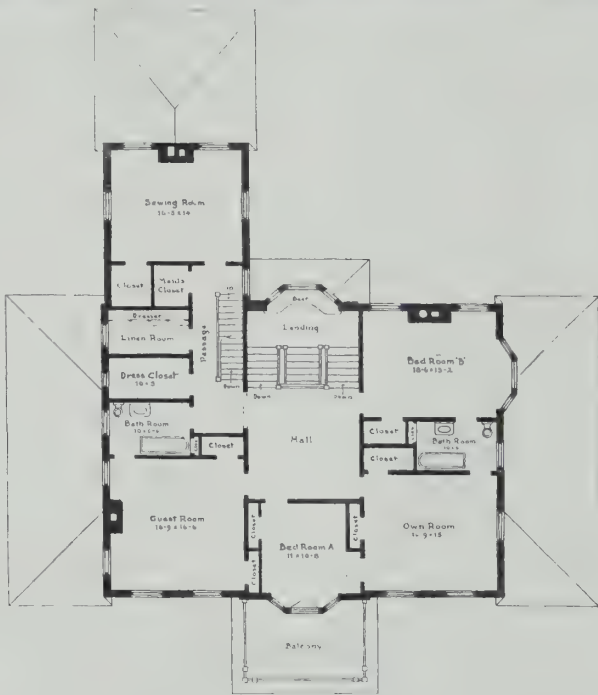
MR. SYDNEY STRATTON, ARCHITECT.



A MODERN RESIDENCE AT PLAINFIELD, N. J.—See page 124.
MR. A. L. C. MARSH, ARCHITECT.



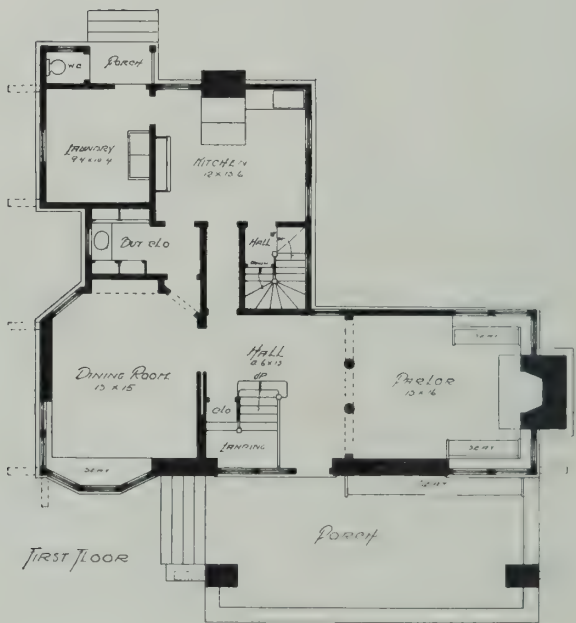
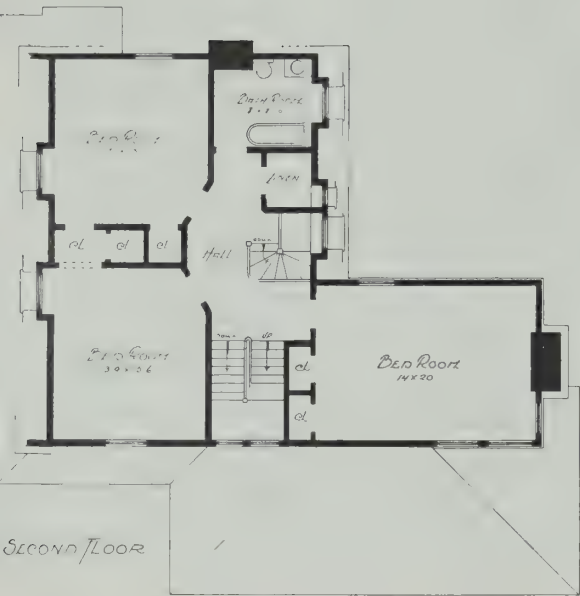
First Floor Plan



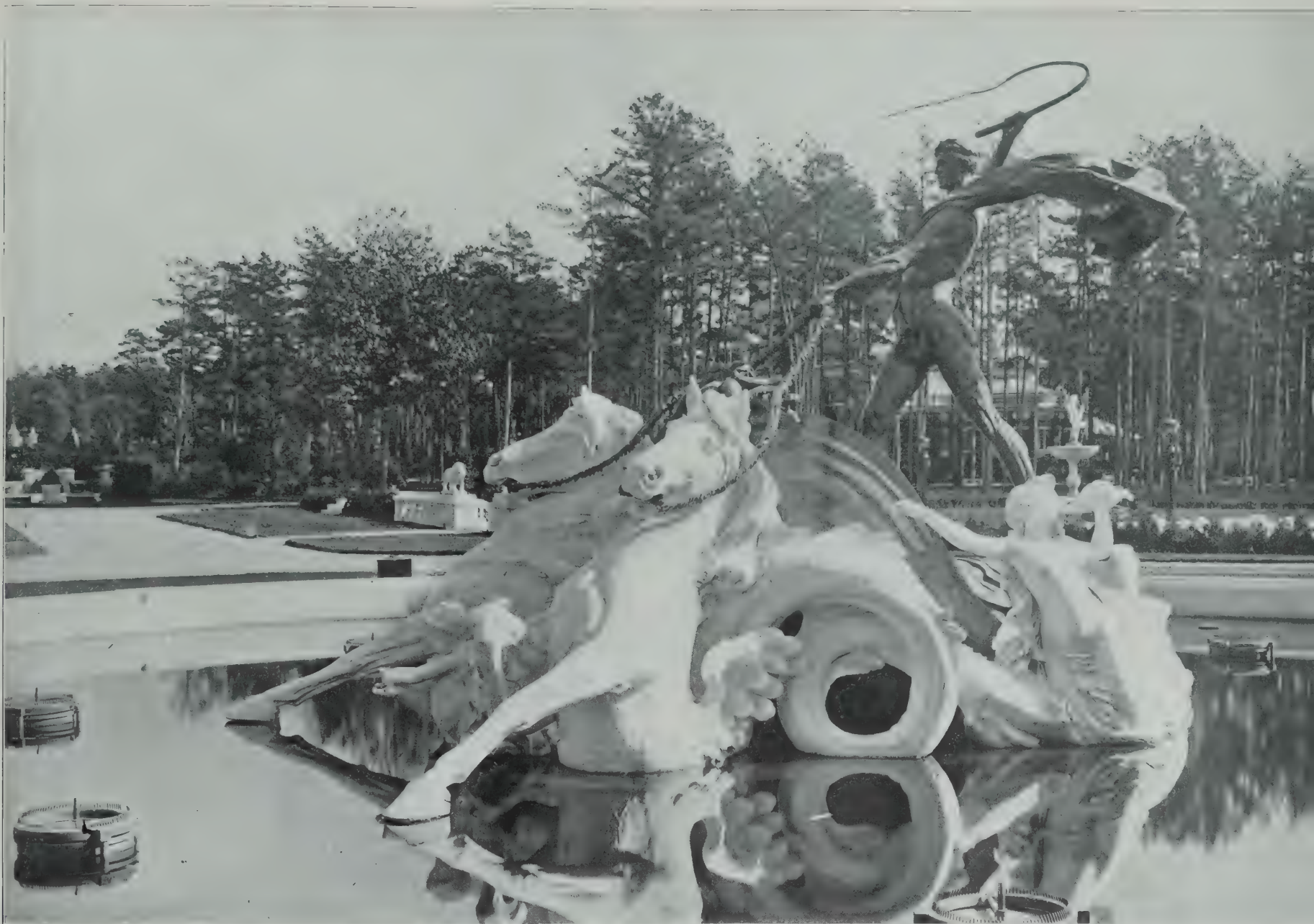
Second Floor Plan



A RESIDENCE AT ST. DAVIDS, PA.—See page 124.
MR. DAVID KNICKERBOCKER BOYD, ARCHITECT.



A MODERN DWELLING AT OGONTZ, PA.—See page 125.
MR. CHARLES BARTON KEEN, ARCHITECT.



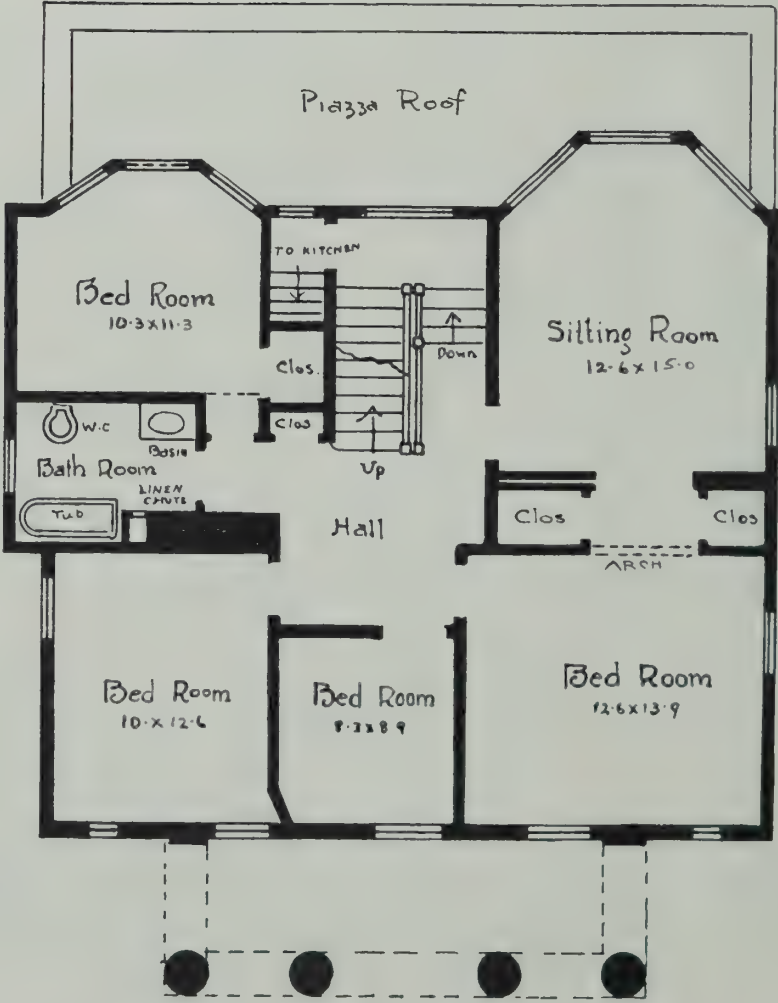
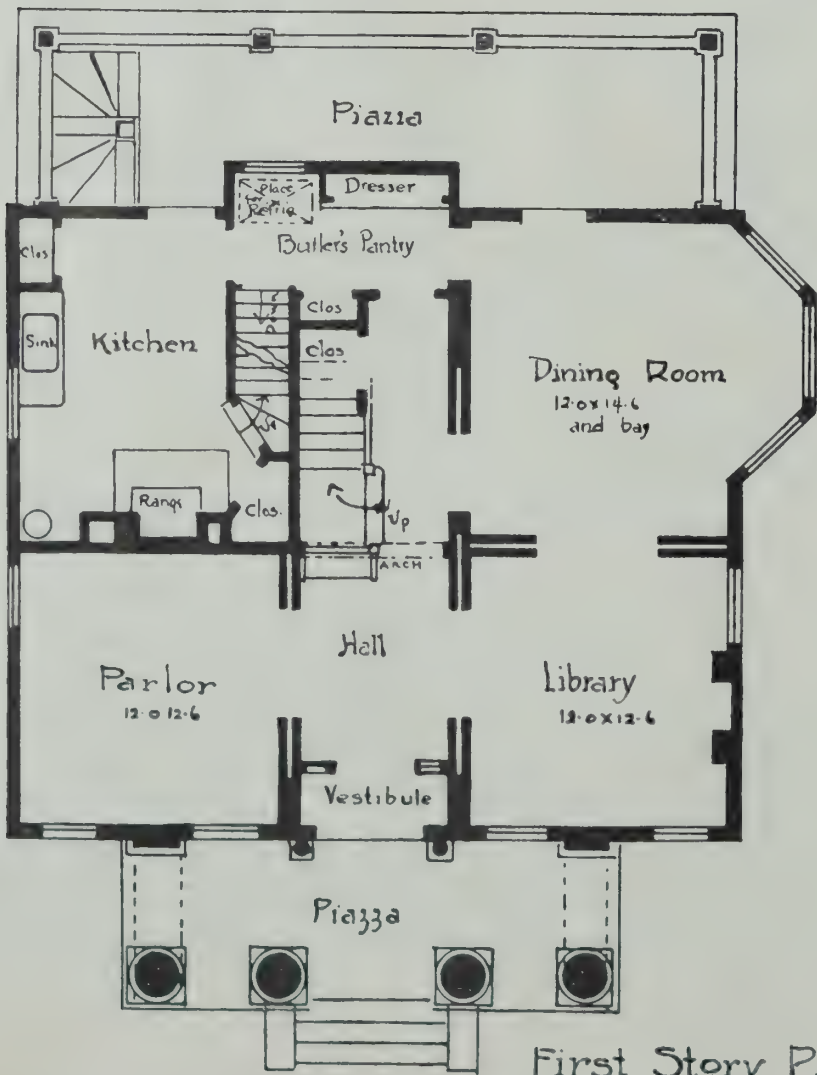
Copyright, 1902, by John Williams.



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THE ELECTRICAL FOUNTAIN AT GEORGIAN COURT.—See page 121.

DESIGNED BY MR. BRUCE PRICE. MR. J. MASSEY RHIND, SCULPTOR.

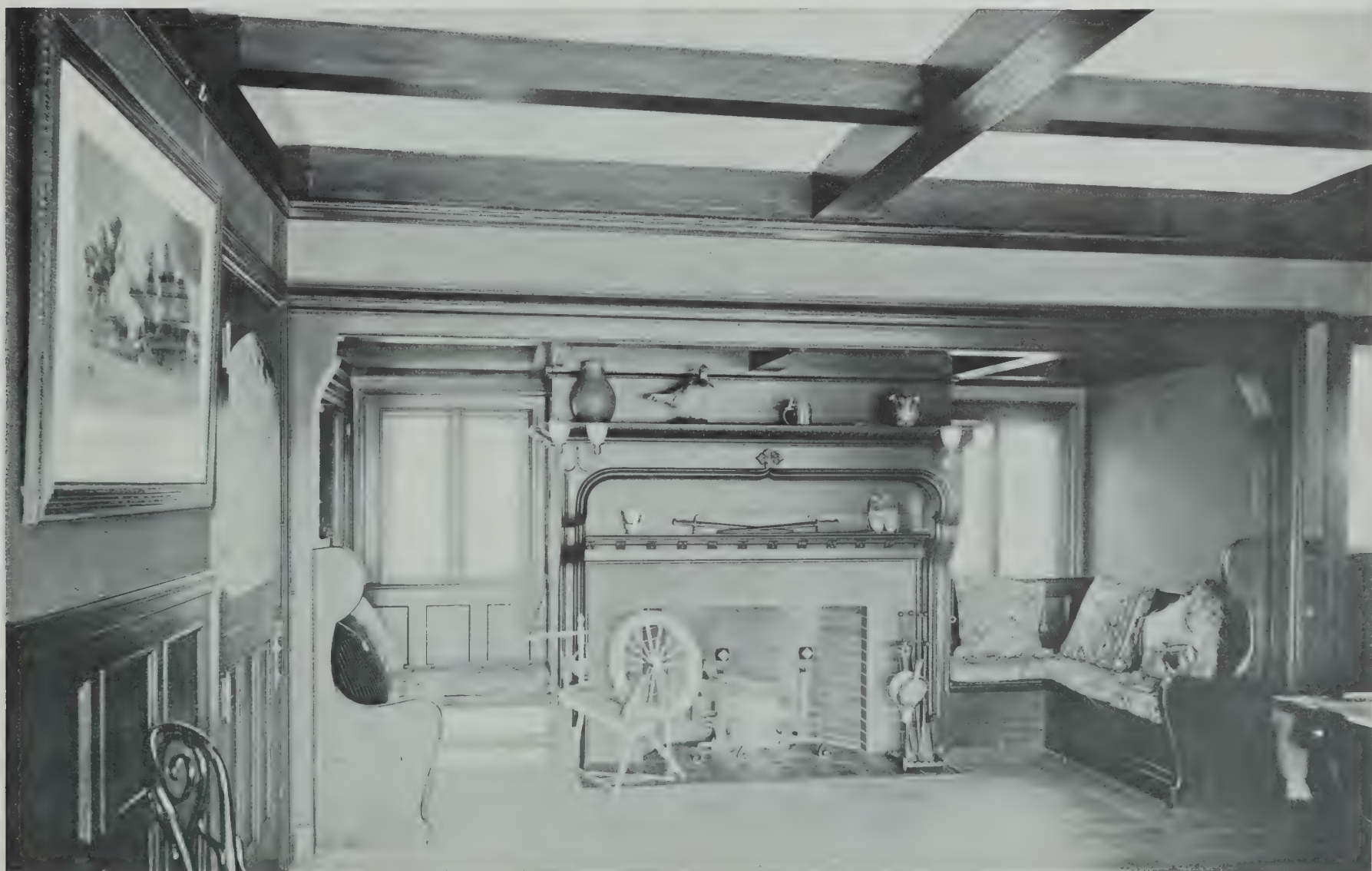


A RESIDENCE AT MOUNT PROSPECT AVENUE, NEWARK, N. J.—See page 124.
MR. WILLIAM D. JONES, ARCHITECT.



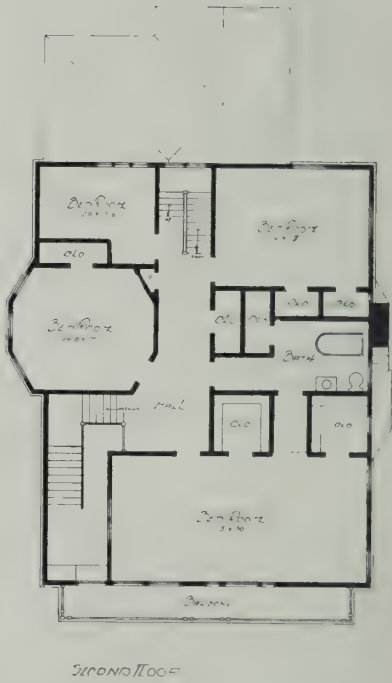
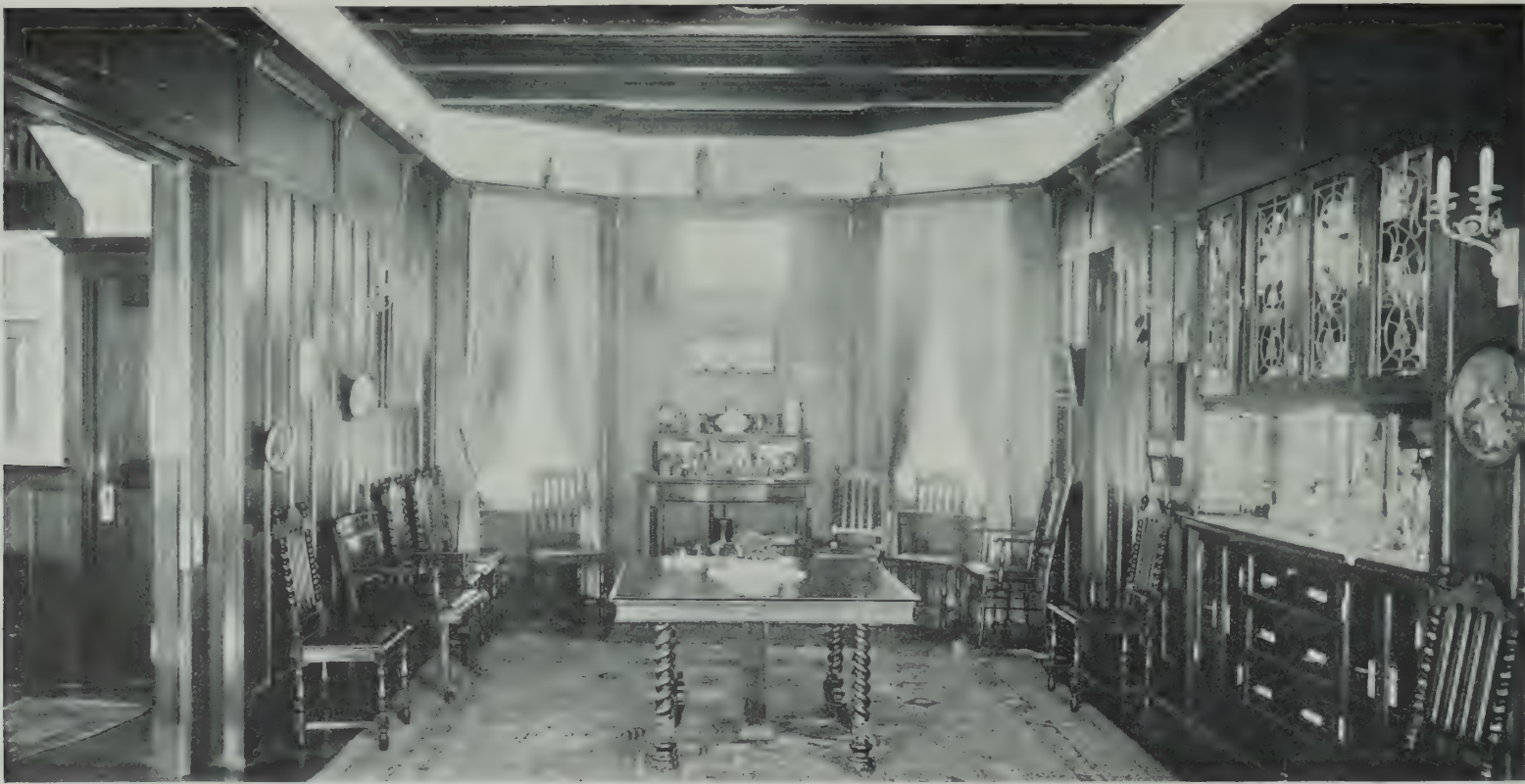
FIREPLACE AND SEATS IN BILLIARD-ROOM, RESIDENCE OF ALFRED MARSHALL, ESQ., MAMARONECK, N. Y.—See page 124.

MR. F. A. MOORE, ARCHITECT.



AN INGLENOOK IN BILLIARD-ROOM, RESIDENCE OF E. N. FOSS, ESQ., COHASSETT, MASS.—See page 124.

MR. H. S. FRAZER, ARCHITECT.



A RESIDENCE AT ATLANTA, GA.—See page 125.
MESSRS. BLECKLEY & TYLER, ARCHITECTS.



The Household

A COZY CHIMNEY-CORNER.

A CHARMINGLY designed chimney corner, says an enthusiast, has a flight of gray black swallows above the mantel, the tiny faraway ones reaching in a graceful curve several yards to the left almost as high as the ceiling. These are painted in water colors, cut out separately and arranged on the wall, which is a warm pinkish terra cotta in color. On the rough stones immediately above the fireplace is engraved the legend in which Oliver Wendell Holmes delighted, to the effect that there is no earthly happiness like "four feet on a fender." Little "three cornered" cupboards at either side increase the apparent width of the chimney place, and below these there are low burlap covered seats fitted in. A pot of English ivy fills one end of the mantel (which is not draped). The longer growths of this are trained up on the wall, and the shorter sprays fall over the mantel. In the low window seat at the opposite side a great fern reaches its yard long fronds to the floor, and a gray green rag carpet rug is laid before the little brass knobbed fender, and one slender, long stemmed vase of iridescent glass near the center of the mantel completes the corner.

NEW CURTAINS.

EACH season offers its novelties in household decorations. The fall has produced some striking effects in curtains, especially a combination of silk and lace. Arabian laces are described as mounted on red, blue, green or gold moiré silk. Sometimes there is a wide border of the lace, then a deep insertion of silk, while the body of the curtain is net. Colored French embroidery on black and colored nets, done in floral and Japanese designs, is also new and attractive. The Austrian Brussels variety of lace is another of the season's fancies. In draping the windows of a boudoir many decorators now recommend an unconventional French treatment, in which a straight breadth of fabric, usually stiffened, is hung upon each side of the window as a framework to the lace curtain. Velours of some desired color, with gold embroidered side lines, is pretty for this purpose. To this straight framework may be affixed a silk or cotton stuff of chintz-like pattern, which should be pleated or gathered the same height as the wainscoting. This material may be used for a box pleated valance across the top of the window.

Some of the double faced silk portières now being made in two patterns, on one side an Empire figure and on the other a floral design, with borders and corded edgings on both, make decidedly handsome hangings. An equally unusual style is shown in a variety of curtains, upon one side of which is an armure ground, with overshot Renaissance figure, and on the reverse side a three color Oriental Bagdad stripe. These are remarkably interesting examples.

CLEANING ORIENTAL RUGS.

WHEN a fine Oriental rug is to be cleaned it may, says a New York contemporary, be sent to a cleaner's or washed at home. At a good cleaner's they will put it in a machine which removes the dust with a strong current of air. But it can be washed without fear of injury, as most Oriental rugs are washed many times before reaching this country, and the colors are only mellowed by it. Stretch and tack the rug on a clean floor, and scour well with soapsuds. Then rinse it thoroughly and leave in position till quite dry.

A DUTCH ROOM.

A DUTCH room, says the Eagle, is at once rich and simple, substantial and homelike. For a living-room nothing could be better, the dark carved woodwork, the cheery Delft china and the polished brass making a happy combination. A little Dutch work table contributes to the cozy air of the room and plate racks and shelves of carved wood are necessary adjuncts. A shelf over some doorway, supported with a low wooden lattice, will make an effective resting-place for bric-a-brac. A good treatment for a corner is an arrangement like a close picket fence of dark wood, the pickets being cube shaped with an edge pointing outward. This railing extends from the ceiling to the depth of a wide frieze and has a shelf at the bottom and a small rail at the top. It is placed close against the wall and makes a good background for pieces of brass or light-colored pottery. Panels of wood carved in high relief with Dutch figures belong properly in the Dutch room, as well as carved wooden screens. Very quaint is a low Dutch fire screen of wood almost black and with natural finish, having in the upper part a band of Dutch maidens in their odd close caps, and below a curtain of leather.

MR. PERCY GRIFFIN ON SMALL HOUSES.

(Continued from page 107.)

was no appropriation for unnecessary ornamentation or needless display. The houses were simply to be as good as could be built for the money, and of as much architectural interest as the funds permitted.

"Fortunately the small English village offered a convenient type of house readily translated into the needs of the new community. Houses were built detached and semi-detached. There are not many of the latter, and while the detached house seems to be the most popular of those proposed, the semi-detached offers quite as many advantages in the way of privacy, perhaps more so, and are warmer and in many ways preferable to the individual house. An English type of architecture was chosen as the basis of the designs, partly because of its own intrinsic merit and beauty, and partly because it met the conditions of construction laid down at the outset.

"It was not proposed to build any houses entirely of wood, and as a matter of fact the houses are of brick or cement with a combination of both with wood beams, or a first story of brick and a superstructure of shingle. The best material and construction has been employed throughout, the cellars being cemented, and hard-burned Jersey brick and the best cement and sand used. A full value has been given for every cent received.

"The idea of 'Homewood' was to supply homes for persons having an annual income of from \$800 to \$1,500 per year, and to offer houses of such type and cost, and on such terms of payment, that these persons might readily perform any undertaking they might engage in in connection with them. No house was to be rented; all were to be sold; for the plan was to create a colony of house-owners who would have a personal interest in keeping the property up to the highest level of maintenance.

"The development of the plan was comparatively simple. Applicants were invited and work begun when 100 applications for houses had been made. The applicant was required to pay 10 per cent. of the purchase price in cash or to offer approved security for the same, the preference being given to those who put up cash. The selection of the kind and size of house rested solely with the purchaser. At the very outset, however, the applicant is required to take out a life insurance covering the cost of the property, and the house is thus positively assured to his family in case of his death before full payment has been made. The terms of payment have been variable, depending on the total amount required and on the ability of the purchaser to pay. The insurance is an essential preliminary, and is effected before any building is begun. The company has, therefore, been amply protected from the very beginning."

"Do you look for a further extension of this work in New York?" I asked.

"At this time," replied Mr. Griffin, "no new work is being undertaken at 'Homewood' owing to the high cost of materials; should there be a decline in these matters many new houses will doubtless be built. The experiment has been entirely successful from a financial point of view, and I know of no reason why others might not be equally profitable in other localities. Certainly the field is large enough. The demand for such buildings is far in excess of the supply, as the records of 'Homewood' amply prove. There is land in abundance and transportation facilities are being constantly extended.

BARR FERREE.

THE ELECTRICAL FOUNTAIN AT GEORGIAN COURT.

THE summer home of George Jay Gould, at Lakewood, N. J., known as Georgian Court, is without question one of the prettiest country homes in this country. The latest acquisition to this beautiful court is an electrical fountain designed by Bruce Price, of which Mr. J. Massey Rhind was the sculptor.

This fountain consists of a white marble basin, sixty feet in diameter. The centerpiece is a colossal Nautilus shell in cast bronze, forming the chariot on which the statue stands. In this chariot stands the driver, also in bronze, who is driving a pair of white marble sea horses, the reins as a marvelous representation of sea moss covering in bronze. A number of white marble sprites and sea nymphs are playing about the chariot and horses. On the extreme front of the shell is modeled an Octopus, and in the top of this is set a sheet of glass. The inner and outer walls of the shell are sufficiently wide to allow for the electrical attachment and lamps, which, when lighted with the different colored lights, throw the color through, many small jets shooting up in a circle around this circular light of glass in the Octopus. There are also six jets of water around the entire centerpiece.

The statue weighs two thousand pounds, and the bronze boat weighs three thousand pounds.

The casting of the bronze work was done at the foundry of John Willams, at Manhattan, N. Y., which foundry since its enlargement is well equipped to do the work of sculptors. See illustration on page 117.



The Garden

THE FLOWER AND SCULPTURE SHOW IN NEW YORK.

A YEAR ago the BUILDING MONTHLY made some comments on the exhibition of the New York Florists' Club in Madison Square Garden, an exhibition so exceedingly unartistic in its arrangement that the chief feature now surviving in memory is numberless pots on poles, and suggested that the exhibitions of the National Sculpture Society would afford useful suggestions in the arrangement of any future exhibition. This year a joint exhibition of the two societies has been held in the Garden, and it would seem, at first thought, as though both organizations might have benefited by the juncture.

It seems strange that the florists, whose special business it is to grow plants and arrange them, should have had to appeal to the superior artistic perception of the sculptors in their annual exhibition. And as a matter of fact the sculptors' conception of the show was much finer, much more artistic than that actually carried out. For at the last moment the florists appeared on the scene, thrust aside the central avenue of trees arranged by the sculptors; took away the sculpture ranged around the sides of the hall, and placed in the center of the room, in the most conspicuous position in the exhibition, a collection of cut flowers, arranged on unsightly wooden benches, and pronounced the exhibit complete and to their satisfaction! It is unquestionably true that the cut flowers thus brought into special prominence were of wonderful beauty and truly regal glory, but it was an arrangement that quite destroyed the symmetry of the whole.

While such of the artistic arrangement of the Garden as survived was due to the sculptures, it can not be said that their portion of the exhibition added to their renown. Some very interesting and some very strong works of sculpture were shown; many of these were well placed—especially the great Washington designed by Daniel C. French for Paris—but many other works were badly placed, and not a few lost their value completely by bad arrangement. Perhaps the sculptors were not to blame for this. They were not alone in the exhibition; their wishes and desires could not be carried out without regard to the associated society; but the fact remains that the exhibition, both as a show of sculpture and a show of plants, was markedly less interesting, less artistic as a whole, less valuable as an object lesson in sculpture and in garden craft than the much more restricted exhibitions which the National Sculpture Society have carried out in the narrower quarters of the galleries of the building of the American Fine Arts Society.

Now one of the chief ends and aims of an art exhibition is to instruct the public. The artists are the masters and leaders of their craft or they fail in being artists. The National Sculpture Society had set so high a standard in its previous public shows that only regret can be felt for the less pronounced success of the recent exhibition. It is fair to add, however, that it suffers more by comparison than in actuality; and it is clear also, to those familiar with its history, that these shortcomings are more due to imperfect cohesion on the part of the exhibiting societies than to any lack of effort or to any lack of skill and ability on the part of either. The florists were simply too much interested in growing plants as plants, of cultivating flowers as flowers, to realize that their art would have been helped the more by showing their products in a thoroughly artistic way.

The visitor to the recent exhibition was, notwithstanding this remarkable record, presented with a "ballot" in a voting contest, asking the recipient to state what, in his opinion, was the most popular sculpture exhibit, and what the most popular floral exhibit! We may grant that the latter question involved no professional or artistic considerations; but that a body of sculptors which includes such names as Ward, St. Gaudens, French, and Bitter, and with whom are associated architects like Geo. B. Post, Bruce Price, Thomas Hastings, Charles F. McKim, and Charles R. Lamb should thus ask for non-professional, haphazard judgment on sculpture, is the very last and the very lowest word in popular appreciation. None of these gentlemen may have personally been responsible for this affront to artistic intelligence, but their organization has been degraded, and the fine record of their past ground to powder. That a body that once thought to lead the public in artistic matters should now ask for public leadership can only mean the disintegration of a once excellent artistic organization, and reduces it to the very nadir of art.

Sanitation

HOME HYGIENE IN THE SCHOOLS.

THE value of instruction in home hygiene in the schools was discussed at the meeting of the Ohio State Board of Health last spring and some comments on the subject are printed in a recent issue of American Medicine. One of the speakers said he had known of charges of overwork in the school when the children were really overworked at home. For instance, one girl was taken from school, but investigation showed that she was practising music three hours a day, besides taking dancing lessons, etc. Injured eyesight is also charged to the school when the pupil is reading novels in a bad light several hours a day. Dr. Warner, of the State Board of Health, went into details, showing how a vast amount of information as to the sanitary care of households could be imparted in the school, the missionary influence of the child being at once felt in the home. There is hardly any child above kindergarten years that is not capable of understanding the rudiments of the needs and methods as to cleanliness, fresh air, temperature of rooms, clothing, exercise, food, sunshine, yard-drainage, garbage disposal, bathing, sleep, purity of water, etc.

A WATER-TIGHT CESSPOOL.

CIRCULAR cesspools, points out the Metal Worker, are the best. They should be finished with a dome shaped top with a suitable opening for the removal of the contents and provided with a vent pipe to prevent the cesspool becoming air bound and to afford ventilation. The cesspool should be located at some distance from any buildings, so that the air or gases emanating from it may produce no bad effect upon those who may occupy the buildings. The size should be determined by those who build it, but care should be taken to have the bottom level and well supported. The bricks should be laid in a good cement mortar, using the best grade of Portland cement. Every brick should be thoroughly embedded in this mortar so that there will be no spaces between them. The walls should be coated, both inside and out, with this cement to make them absolutely impervious to the escape of liquids from the inside or the entrance of surface water from the outside. The pipe through which the sewage is to enter should be well supported on the outside of the cesspool, and its connection with the walls of the cesspool should be strongly and securely made.

RURAL SANITATION.

THE necessity of increased attention to the important topic of rural sanitation is insisted on in a recent editorial in the New York Tribune. Much more is done in England than in this country. There the lesson was long ago learned through sore experience, and has been acted upon profitably, with the result that that country has probably the best rural sanitation in the world. In the United States there is vast variety of practise. In about twenty States there are county boards of health, which have oversight of rural sanitation, but as a rule are not efficient, partly because the country is too large a unit for a single board to deal with and partly because the boards are politically rather than professionally constituted. In a dozen or more States there are township boards, which would be efficient if they were properly constituted and vested with adequate authority. In two States there are neither county nor township boards, but State sanitary agents in each county. Perhaps the most serious trouble is that in most cases where township health boards exist the members of the boards hold their places *ex officio*. They are justices of the peace, town clerks or what not, and they are put into the health board because they hold these other offices, and not because of any special fitness for sanitary work. In one State which has a single health officer for each county it is by some incomprehensible fatuity required that such officer shall be a lawyer.

If in every county of every State there were one authoritative health officer, and he not a lawyer or a politician, but a trained sanitarian, and in every township a deputy under him, also a sanitarian, and if these were sufficiently paid to enable them to attend to their duties, and were invested with sufficient police power to enable them to enforce the law, we should doubtless have a far more satisfactory state of health than at present. We should have fewer outbreaks of typhoid and scarlet fever from contaminated village wells and unclean farm dairies; and the system would cost the public probably not one-tenth as much as do the unnecessary funerals which are now due to defective sanitation.

A RESIDENCE AT ELIZABETH, N. J.

THE illustrations shown on pages 105, 108, and 109 present the residence of F. H. Davis, Esq., at Elizabeth, N. J. The principal feature of the exterior is the classic portico at the front, which is supported on fluted columns with carved Corinthian capitals, and which give the entire building a dignified appearance. The house is constructed of cream colored brick with Indiana limestone trimmings. The woodwork is painted white. The roof is covered with shingles and is painted red. Dimensions: Front, 117 ft. 4 in.; side, 43 ft. 8 in., exclusive of porches and conservatory. Height of ceilings: Cellar, 8 ft.; first story, 11 ft.; second, 10 ft.; third, 9 ft.

The entrance is into a large central hall. The woodwork is of pine and treated with white enamel. This hall has a paneled wainscoting and a massive wooden cornice. The grand staircase is of handsome design, with broad landings, fluted balusters, with a newel formed of the same, and a rail of mahogany. The fireplace is built of Tiffany brick with the facings and a hearth of the same and a mantel and paneled over-mantel. The archway leading into the connecting hall is provided with fluted pilasters.

The drawing-room is trimmed with pine and is treated with china white, and is provided with paneled wainscoting, wooden cornice, and a fireplace furnished with African marble facings and a hearth, and a mantel of Colonial style with shelf supported on fluted columns. The den is trimmed with pine and is painted green of an attractive shade. The library is trimmed with oak and it has book-cases and seats built in and extending around the room. There is also a paneled wainscoting and a wooden cornice. The fireplace is built of brick with similar facings and hearth. The conservatory is an attractive feature of the library, and it has a white marble floor and white enamel painted trim.

The dining-room, extending through the entire depth of the house, is trimmed with mahogany. It has a paneled wainscoting, a wooden cornice, and a beamed ceiling. The two bay windows at either end of the room have paneled seats. The fireplace is provided with handsome facings and mantel. The butler's pantry is fitted up complete with drawers, shelves, cupboards, and bowl. The kitchen and its dependencies are trimmed with ash, and each are fitted up with the best modern conveniences.

The second floor is trimmed throughout with white pine and is treated with white enamel. This floor contains five bedrooms, with large closets, three bathrooms, sewing-room, linen closet, besides three servant bedrooms and bathroom. The bathrooms have tiled wainscotings and paved floors, and they are furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains ample guest's room. The cellar is provided with the usual heating apparatus, cold storage room, coal and wood bins. The house was designed by Mr. C. P. H. Gilbert, architect, 1123 Broadway, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

WINDOW TREATMENT.

THE relationship of the window to the room, and the part it plays in making it an attractive apartment, is well shown in the photographs reproduced on page 111.

The charm of both these rooms is, to a large extent, determined by their windows and the manner in which they are made definite parts of the whole apartment by their furnishings and treatment. The view of the library in the residence of Milton Tootle, Esq., Mackinac Island, Mich., Mr. A. W. Buckley, Chicago, architect, shows two windows, each simple enough in architectural form, yet full of character and very largely determining the effect of the entire apartment. On the side is the low short window, now in general use for rooms devoted to library purposes, since that form permits book cases to be carried beneath it. This style of window, while admirably adapted to its purpose, is sometimes faulty since, if it alone is used, the occupants of the room have no external view while remaining seated at the desk or table. In this particular apartment this difficulty is overcome by the insertion of a large bay or oriel window, whose generous openness admits a flood of light and at the same time permits that free view of the landscape which adds greatly to the charm of any apartment.

The other picture, showing a part of the hall in the residence of William Hall, Jr., Esq., at Summit, N. J., Mr. Wilbur S. Knowles, architect, while less elaborate, is only so because a hall is naturally less sumptuously furnished than a living-room or library. Here again is a pleasant window, swelling outward above the seat which is thus provided for, and which, with its piled up cushions, is a picturesque feature of the room. A pleasant nook in a pleasant hall.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

Heating Talk

THE PROBLEM OF THE HOUR.

THE discontinuance of the coal strike, while allaying public concern relative to the immediate fuel problem, has by no means diminished the interest of the public in the problems of heating. The concentration which has been directed toward this question has been too great for it to pass away without leaving a permanent impression. People realize now, as they never did before, the value of coal and the necessity for cheap fuels. The past fall has seen more gas ranges and heaters installed than ever before; oil has come into further favor and has found use where even gas may be had. This means that less coal is being burned than at the same season in previous years.

ELECTRIC HEATING IN THE HOUSE.

A CONTEMPORARY points out that heating by electricity is still too costly to have domestic value. It is used in railway cars to avoid the use of stoves, and even there is much more expensive than coal fires. If such is the case, it continues, it can readily be seen that the time has not yet arrived when this agency is available at a sufficiently low price to make it practical for household use. Another obstacle to the use of electricity, for cooking in particular, is that special utensils are needed which are much more costly than tin and enameled ware pots, kettles and pans.

THE BLUE-FLAME BURNER.

THE weekly Scientific American prints a valuable article on substitutes for coal in heating and cooking, in the course of which it gives a lucid explanation of the workings of the blue-flame burner. In the blue-flame oil heater the kerosene, which is stored in a reservoir, is permitted to flow slowly into a vaporizing device, from which it passes to a burner. In one class of stoves the vaporizing device is a circular trough, made of cast iron, which is heated to a very high temperature. This vaporizes the kerosene and the vapor thus produced is compelled to pass between two walls of red hot metal while at the same time heated air is caused to act upon it. The temperature to which the vapor is raised by this means is so great that both the hydrogen and carbon are compelled to combine with the oxygen, and, the united energy of combination of hydrogen and carbon in combination with oxygen being greater than that of hydrogen and oxygen in combination without the carbon, the flame is much hotter. Since the carbon of the kerosene is completely burned instead of being merely heated white hot, there is but little illumination with this flame. The wickless stoves, as they are called, burn about 22 hours per gallon of kerosene per burner.

OIL BURNERS FOR RANGES.

THE same authority describes a couple of oil burners for use in the ordinary range. In one the burner consists of a coil of $\frac{3}{8}$ -inch outside diameter iron tube affixed to a cast-iron trough. A vertical plate thickened where the flame strikes it, is so placed that the flame impinging upon it is deflected back on the coil. There is an exceedingly fine hole (No. 70 drill gauge) through which the vapor from the kerosene is forced. The burner is placed in the range so that the supply pipe is vertical with the inlet downward, the outlet being connected by an iron pipe to a tank in which kerosene is stored under an air pressure of 3 to 10 pounds per square inch. The oil supply to the burner is regulated by a needle valve. Five pounds pressure is found ample for cooking stove work. Air pressure is obtained by means of a small pump attached to the reservoir, and the amount is indicated by a gauge.

In another burner the air-pump is dispensed with, and the pressure necessary to feed the oil is obtained by placing the tank of oil at a sufficient height above the burner to secure a flow of the oil by gravity. The oil is led through a needle valve which is placed just outside of the fire door, into a small iron rectangular box placed just within the fire door, where it is vaporized by the heat of the burner. From the vaporizer a pipe leads the vaporized oil to a length of horizontal pipe which extends above a perforated cast iron box. At the two ends of this horizontal pipe and on its under side are two fine pin holes, through which the vapor issues in a fine jet and burns with the characteristic hot blue flame. The force of the jet drives the hot flame down through a couple of inch-and-a-half holes, located in the top of the iron box immediately below the jets. The flame and hot products of combustion fill the perforated box and pass out through the perforations, raising it to a red heat.



SOME NEW DESIGNS.

SIMPLICITY in wall papers is now much in vogue. A contemporary gives some hints on the newest styles. Some new papers have a figure so small or so faint as to serve merely to break the monotony of the plain surface, but where there is any attempt at a pattern it is apt to be bold and decided—with a striking absence of conventional design and a preponderance of huge single blossoms. These are usually roses or peonies, hanging heavily from slender stems, but done in such dull, well blended colors that they are not startling.

These patterns are printed, from blocks, and closely resemble the hand woven tapestries. Combining pastel shades of blues, greens, and browns, they are especially available for halls and vestibules.

A hall hung with tapestry paper may have every room opening off it papered in entirely different solid colors and yet, when the doors are thrown open, they will be grouped together in pleasant transition by means of the tapestry design.

Broad stripes are useful in small reception rooms with low picture moldings. Paper in wide stripes seems to broaden a room and spread the walls out to good advantage. Some have satin stripes of the same color as the background; some come with backgrounds a shade or two lighter than the stripes, but rarely do they combine colors—unless it be that a small figure is introduced in the spaces between. They may be found in clear reds, sunny yellows, and handsome greens.

BEDROOM PAPERS AND DRAPERIES.

IN bedroom papers some of the most attractive designs and colors, says the Tribune, are repeated in quaint and expensive cotton stuffs, which are the prettiest materials on the market for cushions, curtains, and screen covers. Many people prefer a bedroom paper so figured as to need no other decoration; but they are chiefly the people who use their bedrooms merely to sleep in and who have their books and pictures elsewhere. However, for those who have not the space for this arrangement, the plain papers are deservedly considered the best.

The curtain materials show the same strong tendency toward simplicity and durability. They are seen everywhere in all kinds of open work patterns, from all qualities of fish net to heavy woolen materials in lattice work weaves. The nets wash well and the wools can be redipped nicely in case they fade.

The more expensive stuffs for draperies are rather coarse and irregular, like the Oriental silks, in high favor this year, and they all seem ambitious to appear handmade. The colored pongees will be much used for housefurnishings. When there is any pattern at all in the new silks they are figured, like the wall-papers, in huge, petaled flowers of dark tones. The so-called "shadow silks" are beautiful, and so soft that they crush up in the hand like so much old lace, and will not crease or "hang lank." For rooms decorated with tapestry paper the plain drapery silks are best, while the figured silks just described are most becoming to a room which has plain walls of one shade.

POSTER WALL PAPERS.

AMONG the novelties in Parisian wall papers there are some striking poster effects. One style shows a grotesque lizard and fox design. Another is a girl's figure in a poster frieze, with a moiré side wall. Another fabric effect in the side wall has bunches of cherries, and in the frieze is a little poster boy picking the fruit. In still another, birds are flying over the side wall, with poster cats watching them from the frieze.

EMBOSSSED PAPERS.

SOME discussion has arisen in England over the use of embossed papers. The point is made that they have tended to drive out the need for certain skill on the part of the professional decorator which he formerly had. It seems not unnatural that there should be a tendency for using these appliances which would gradually eliminate the craft of the decorator, and the man who was jealous of his craft would be likely to look askance upon the introduction of any mechanical means which would tend to reduce the skill of hand and eye.

The continued use of this form of decoration is attributed to the bad plasterwork, which had introduced embossed canvas and other materials. To put good painting on bad plaster seems a waste of material, and hence the popularity of embossed papers, which give rich effects at comparatively low cost.

AN ENGLISH RESIDENCE AT GLEN RIDGE, N. J.

THE residence of English treatment, which is illustrated on page 110 has been erected for J. F. Angell, Esq., at Glen Ridge, N. J. The design is an example of the English style of brick and plaster. The underpinning and first story is built of red brick laid in red mortar. The superstructure is coated on the exterior with a cement plaster tinted in its natural silver gray color. The trimmings are painted a deep brown color, and the sashes cream white. The roof is covered with shingles and is stained a moss green. Dimensions: Front, 55 ft. 6 in.; side, 40 ft., exclusive of porch and piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft.

The interior plan comprises many good features. The entrance porch is provided with a paneled seat, while the entrance hall forms a vestibule and separates the parlor from the remainder of the house. This parlor is trimmed with white pine and is treated with white enamel, and contains a cluster of small windows and an open fireplace furnished with tiled facings. The hall is trimmed with old English oak, and has a paneled seat built in nook and a staircase of Gothic design.

The living-room is attractive with its dark oak trim, paneled wainscoting, and ceiling beams. There are book-cases built in, and the ingle nook, with its paneled seats and fireplace, is the most important feature. The dining-room is trimmed with similar oak and is provided with a paneled wainscoting, a beamed ceiling, and an open fireplace fitted with tiled trimmings and a Gothic mantel. The butler's pantry is fitted with sink, dresser, drawers, and cupboards. The kitchen is provided with pantries, rear hall, and stairway, and a laundry furnished with all the best modern conveniences. These rooms are trimmed with North Carolina pine and finished natural.

The second story is trimmed with pine, treated with white enamel. This floor contains three bedrooms, dressing-room, sewing-room (which can be used for a bedroom if desired), bathroom, and one large servants' bedroom and bathroom. The owner's bathroom is fitted with a tiled floor and wainscoting, and is furnished with porcelain fixtures and exposed nickel-plated plumbing.

The third floor contains several bedrooms and ample storage room. There is a furnace, cold storage-room, etc., in the cellar. Mr. Frederick A. Jaerschky, architect, Newark, N. J.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

"ALL VIEW," THE RESIDENCE OF C. OLIVER ISELIN ESQ., AT PREMIUM POINT, NEW ROCHELLE, N. Y.

ON the cover and also on pages 107, 112, and 113, are presented pictures of "All View," the residence of C. Oliver Iselin, Esq., together with the gardens, at Premium Point, New Rochelle, N. Y. The house was designed by Sydney Stratton, of New York, and is one of the most extensive country houses on Long Island Sound. It is placed in the midst of fine grounds, decorated with all the resources of the landscape architect's work. Its great size and its stately architecture, combined with the splendor of its appointments, make it most harmonious in its completed whole.

The main building is constructed of brick, with trimmings of white marble. The white marble vestibule at the front forms the principal characteristic of the exterior.

To the right of the court leading up to the front entrance is located the formal gardens, which are reached by marble steps rising from the court.

The garden is of extraordinary beauty, and covers a large stretch of ground. It is comparatively simple in design—four large pieces of lawn, with a central circle, the lawns having each a central bed surrounded with wide borders. But this scheme has been so finely worked out, the plants are so admirably arranged that it is complete in itself. Unlike many large formal gardens Mr. Iselin's does not depend on an architectural setting for its effect. Architectural decorations are, indeed, almost wanting in it. But there is no loss because of this. On the contrary, there is a special individuality in the dependence on nature itself, on plants and shrubs, on trees and vines. Large and splendid as it is, it shows what fine effects can be accomplished without the addition of costly architectural fixtures.

The rose garden, of which a glimpse is shown near the house, is a special feature of this estate, and contains an immense quantity of plants, all brought to a high degree of perfection. The illustrations, all of which are made from photographs expressly taken for the BUILDING MONTHLY, present some of the more striking views of this charming garden. Many times the illustrations given would be necessary to exhaust the beauties of this lovely place. It is a fine example of good taste, well applied, ably developed and brought to a high state of cultivation.



IS THE KITCHEN INDISPENSABLE?

THE assertion is solemnly made in a recent magazine that the kitchen must go. The kitchen, like the spinning-wheel and the old-fashioned reaper, says this audacious reformer, must sooner or later become merely a relic of a bygone age. There will be those who will deplore the disappearance of the kitchen and home cooking, just as there were some who lamented the displacement of the candle by lamps, lamps by gas, and gas by the electric light; but labor-saving devices and modern inventive genius are invading the kitchen, and its days will soon be numbered.

Almost every branch of human industry has either been revolutionized or has had its pulse-beat quickened by being brought into contact with inventive genius and labor-saving devices. The kitchen alone has heroically resisted the aggressive encroachments of modern improvements. In the majority of homes, while the husband reaps the advantages which have been developed by modern science, his wife continues to supervise a kitchen whose methods have not been materially changed since the days when her grandmother divided her time between bending over the spinning-wheel and working in front of a hot fireplace.

The education of the average cook has not been sufficiently extensive to enable her to discover the fact that nuts are the most nutritious food that nature produces; much less has she acquired the art of transforming them into wholesome, appetizing, and readily digestible food preparations. The dainty nut preparations that are now made in many factories, as a result of painstaking experimentation and in accordance with definite formulas, afford a splendid demonstration of the superiority of the food factory over the kitchen.

It is already acknowledged that fruits can be put up more beautifully as well as more successfully in the canning factory than in the kitchen. This does away in one stroke with the annual fruit-canning annoyances that were such a source of affliction to our patient mothers and grandmothers.

MODEL KITCHEN IN BOSTON.

SEVERAL model kitchens were shown at the Mechanics' fair held in Boston this fall. A lecturer during the exhibition pointed out that it requires an exceptional woman to have an up-to-date kitchen while the front hall still needs a rug or two or a chair to bring it to the degree of attractiveness its owner would see it assume. But these women are the only ones who succeed in having an exceptional kitchen, a twentieth century kitchen, that is, equipped *con amore* with pans, cans, jars, and the thousand and one things the room should have. Such an equipment the managers of the "set kitchen" in the exhibition collected and arrayed, and in similar quarters a dainty woman could maintain daintiness as easily as in a boudoir.

Another kitchen was worth noting for the practical idea it showed of turning a kitchen into a living room in a tenement house. Shelves for books and shelves for covering and concealing furnishings which no kitchen can be without and still be a kitchen made the transformation.

KITCHEN EQUIPMENT.

To equip a kitchen with all the conveniences now at the command of the mistress of the home, says the Brooklyn Eagle, costs a small fortune and the sum that is expended upon the absolute necessities for modern housekeeping would have made the old time housewife gasp with astonishment. It is an often heard comment that the luxuries of one generation are the necessities of the next, and this statement is as applicable to the equipment of the modern kitchen as to the demands of the age in other directions. Think of a man making annual, perhaps semi-annual trips to Europe to secure pots and pans, baking dishes and meat choppers and the rest, just as a dressmaker or milliner crosses the Atlantic to secure for American patrons the best that the foreigner has to offer and also to gather suggestions that can be carried out by the alert home worker and manufacturer. England, France, Germany, and even Switzerland are regularly visited by the housefurnishing man in search of new ideas, and he finds it pays, for the American woman likes novelties in utensils and household contrivances no less than in decorative effects and dress.

TO FRESHEN AIR.

It is said that a few drops of oil of lavender in a silver bowl or ornamental dish of some kind, half filled with very hot water, and set in the dining-room just before dinner is served, gives a delightful and intangible freshness to the atmosphere of the apartment.

A MODERN RESIDENCE AT PLAINFIELD, N. J.

THE modern residence which is illustrated on page 114 has been erected for Mrs. J. H. Hallock, at Plainfield, N. J. The underpinning and chimneys are built of vitrified brick laid in an irregular manner. The superstructure is of wood, and the exterior framework is covered with matched sheathing and then shingles, which are stained a soft brown color. The bay window and gable ends are covered with stucco work, and are tinted a cream yellow. The trimmings are painted white. The roof is covered with shingles stained a dark green. Dimensions: Front, 51 ft.; side, 32 ft., exclusive of porch. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft.

The plan shows a living-hall, which is the principal feature of this house. It is trimmed with white pine, treated with white enamel, and contains a ceiling beamed with chestnut and stained a dull brown, an angle nook, with broad seats, leaded glass windows, and an open fireplace, with Roman brick facings and hearth, and a mantel. The staircase is recessed in an arched alcove, and is of an ornamental character in Colonial style. There are leaded glass windows between this living-hall and dining-room, under which there are book-cases built in. The reception-room is trimmed with white pine and is treated with white enamel. It contains an open fireplace, which is furnished with a tiled hearth and facings and a mantel of Colonial style. The dining-room is also trimmed and treated the same as hall, and has a bay window with a paneled seat and French windows, which open on to the porch at the side. The kitchen is furnished with all the best modern conveniences.

The second story is treated with white enamel, and contains four bedrooms, which are fitted up with large closets, and a bathroom furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains servant bedroom and ample storage space. A cemented cellar contains a servants' closet, furnace, and laundry. Mr. A. L. C. Marsh, architect, 97 Nassau Street, New York City, N. Y.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

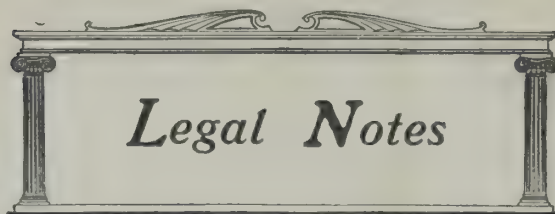
A RESIDENCE AT MOUNT PROSPECT AVENUE, NEWARK, N. J.

THE illustrations shown on page 118 present a residence erected for George H. Matthews, Esq., at Mount Prospect Avenue, Newark, N. J. The home is treated in the Colonial style, with a classic portico at the front, supported on fluted columns, with Doric capitals. The underpinning is built of Belleville brown stone, with square joints and rough tooled faces. The exterior framework is covered with rabbeted sheathing boards and building paper, and the whole is covered with white pine clapboards. The exterior is painted Colonial yellow, while the trimmings are painted white. The roof is covered with red cedar shingles. Dimensions: Front, 34 ft.; side, 29 ft. 6 in., with bay window and other projections as shown. Height of ceilings: Cellar, 8 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. Front piazza is 7 feet wide and the rear piazza is 8 ft., and extends across the rear of the house. One of the principal features is the front entrance way, with its delicate Colonial details.

The vestibule is tiled with mosaic tile of suitable design. The hall, which is a central one, is trimmed with quartered oak, and it contains an ornamental staircase with ornamental paneled newels, turned balusters, etc. This staircase is separated from the hall proper by an archway, at the side of which there is a paneled seat. The parlor is trimmed with white pine and treated with white enamel and gold. The walls are covered with a heavy embossed paper of cream tint. The library and dining-room are trimmed with quartered oak, and the former has a false open fireplace with tiled trimmings and mantel. The butler's pantry has cupboards with shelves, and glazed doors, and drawers, store closet, and ice-box. The kitchen has a coal and gas range and hot-water heater attached to boiler. The sink is brown glazed earthenware, with slate drain-board and back. The trim in kitchen is of cypress and finished natural.

The second floor is trimmed with white pine treated with white enamel, and contains four bedrooms, large hall, sitting-room, large, well-fitted closets, and a bathroom furnished with porcelain fixtures and exposed nickelplated plumbing. The principal bedroom and sitting-room are connected by an archway provided with a wooden grille. The third floor contains three bedrooms and a large hall. There is a laundry, with brown glazed earthen tubs, and open plumbing, a photographic dark-room, cold storage, heating apparatus in the cellar. The house is lighted by gas and electric light, and is furnished with brass-finished hardware and glass knobs. Mr. William D. Jones, architect, 245 Broadway, New York.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

**AUTHORITY OF ARCHITECT AS TO SCAFFOLDS.**

THOUGH each contractor for the different portions of the work of a building agreed to furnish his own scaffolding, yet, the work necessary to be done before the carpenter work could be completed being delayed, the architect, described in all the contracts as the acting agent of the owner, could bind the owner by agreement with the contractor for the woodwork that such contractor should erect a scaffold, not necessary for his work, to be used by the other contractors, and paid for by the owner, the architect agreeing with the other contractors, who were to use it, that the cost should be deducted from their payments. *Teakle et al. vs. Moore*, 91 N. W. Rep. (Mich.) 636.

BUILDING CONTRACT—WAIVER OF PROVISIONS.

WHERE a contract provides that neither party thereto shall have any claim for alterations or additions unless first particularly described in writing, and the valuation agreed upon committed to writing, and signed by the parties before such alterations or additions are made, it is competent for either party to waive this provision, intended for his benefit, and it is for the jury to determine from the evidence whether it in fact has been waived. *Copeland vs. Hewett et al.*, 53 At. Rep. (Me.) 36.

CLAIMS FOR LIEN—VERIFICATION BY AGENT.

UNDER a mechanic's lien statute which requires an affidavit of claim to be filed by a subcontractor, but does not designate the person by whom it shall be made, it may be made by any person who deems himself sufficiently acquainted with the facts, as agent for the claimant. *Great Southern Fireproof Hotel Co. vs. Jones et al.*, 116 Fed. Rep. (U. S.) 793.

DISAFFIRMANCE BY SUBCONTRACTOR.

EVEN if a subcontractor was entitled to disaffirm a contract to furnish building material on account of the insolvency of the general contractor, his failing to repudiate after knowledge of all the facts, his calling on the owner for aid in collecting the purchase money, and his filing of a mechanic's lien constitute a ratification. *Rector, etc., of University of Virginia vs. Snyder et al.*, 42 S. E. Rep. (Va.) 337.

ENTIRE JOB—ITEMIZED STATEMENT.

WHERE the work undertaken by a subcontractor is an entire job—as the construction of a heating and ventilating plant—for an entire price, and the contract is set out in the affidavit claiming a lien for the contract price, an itemized statement of account is not required under such statute. *Great Southern Fireproof Hotel Co. vs. Jones et al.*, 116 Fed. Rep. (U. S.) 793.

HOUSE WRECKING—INJURY TO SERVANT.

DEFENDANT, a wrecking company incorporated in Illinois, was engaged in tearing down the buildings used during the exposition at Omaha. There was evidence tending to show that one B., during several months while the work was in progress, performed the actual duty of superintendence—hiring and discharging men, and directing the foremen of the several gangs as to their work—although the treasurer of the company remained in Omaha during most of the time, and had full power to represent the company in all matters. Plaintiff, who was a workman employed by defendant in the work, was injured through obeying a negligent order given by B. Defendant introduced evidence that B. had no independent power of superintendence, but was only an intermediary through whom its treasurer, who was superintending the work, communicated his orders and executed his powers, and occupied the same position toward the company and its employees as other foremen. *Held*, that the question whether B. was in fact vested with and exercised the powers of a general superintendent over the work was one for the jury. *Chicago House Wrecking Co. vs. Birney*, 117 Fed. Rep. (U. S.) 72.

CANCELLATION OF CONTRACT.

WHEN a contractor under a written contract for work on a building is stopped in the performance of the work by the other party in an action by the contractor on the special contract, the compensation for the work already performed is not measured by the market price, but by the contract price. *Hoyle vs. Stellwagen et al.*, 63 N. E. Rep. (Ind.) 780.

A RESIDENCE AT ST. DAVIDS, PA.

THE engravings shown on page 115 present a modern suburban residence erected at St. Davids, Pa., from plans prepared by Mr. David Knickerbocker Boyd, architect, Harrison Building, Philadelphia, Pa. The building is constructed of brick and is covered on the exterior with a rough plaster cast, the corners being red brick quoins laid in white mortar, and the Palladian windows at the front having red brick arches. The underpinning, terrace, and porch are constructed of long, flat-bedded gray stones. The rough plaster coat is tinted a Colonial yellow, while the trimmings are painted white. The roof is covered with shingles and is left to weather finish. The main part of the house is 36 ft. by 50 ft., exclusive of the porches and the kitchen extension, which is 18 ft. by 36 ft. Height of ceilings: Cellar, 7 ft. 3 in.; first story, 9 ft. 9 in.; second, 9 ft.; third, 8 ft. 6 in.

The vestibule of large dimensions, and the hall, are trimmed with white pine treated with white enamel paint; the former has paneled seats and broad doorways, while the hall contains a stairway of Colonial detail with mahogany handrail, rising from the center of the hall and returning on both sides from a large landing, on which there is a wide bay window with a paneled seat. The sides of the stairway is paneled. At one side of the stairs are three steps, which lead down into a cozy den, which is located under the landing, and provided with a paneled seat and closet. The reception-room is trimmed with pine and treated with white paint.

The living-room, treated with mahogany stain, opens from the reception-room and hall in pleasing contrast to their white finish. This room has book-cases built in and an open fireplace furnished with tiled facings and a hearth and mantel, and paneled seats on both sides of the fireplace. The dining-room is trimmed with quartered oak, and the walls have a dado of dark red burlap 5 feet in height, with a plate-rack at this height, above which the space to ceiling is covered with tapestry effect. The ceiling is beamed and the spaces between are of sand finish. At one end of the dining-room there is an arched recess for the sideboard, and on one side a china-closet, with leaded glass doors balanced in effect by the leaded glass doors into the pantry on the other side of recess. There is a fireplace fitted up complete. The butler's pantry, servants' dining-room, kitchen, laundry, etc., are trimmed with yellow pine and finished natural. Each apartment is fitted complete.

The second floor is trimmed with pine and is treated with ivory white paint. It contains four bedrooms, two bathrooms, dress closet, maid's closet, etc., and a large sewing-room. The bathrooms are furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains a billiard-room, two bedrooms, one bathroom, and a trunk room, trimmed with yellow pine. A cemented cellar contains the heating apparatus, cold storage room, coal and wood bins.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

THE BILLIARD-ROOM.

A DISTINCTIVE apartment for a distinctive purpose is one of the predominating qualities of the modern house. A large house is not only large because it contains many rooms, but because it has many rooms intended for special uses. While there is a likelihood, at times, of a superabundance of rooms, even in the greatest houses, a billiard-room is one of the apartments which can be devoted to no other use. It is true combination dining and billiard tables are to be had, but it is no detriment to these useful articles of furniture to remark that the billiard table of itself and for itself is the favorite. A billiard-room is thus frequently found in houses of modest dimensions, and very often it may be one of the most attractive rooms in the house.

Two recent billiard-rooms are shown on page 119. Interesting in themselves, and yet without undue elaboration, they exhibit the one quality that distinguishes this sort of rooms from the other apartments of the house, namely, a clear center space, with comfortable lounging benches around the walls. Given these elements, and the billiard-room is ideal.

Of the billiard-rooms illustrated one is from the residence of E. N. Foss, Esq., at Cohasset, Mass., Mr. H. S. Frazer, Boston, Mass., architect. The other, which shows the fireplace and seats, is a glimpse of the billiard-room in the residence of Alfred Marshall, Esq., at Mamaroneck, N. Y., Mr. F. A. Moore, architect.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

TRELLIS papers are decorated with nasturtiums, roses, lilacs, and wistaria. They come in various tones. There are white, pink, blue, brown, gold, silver or cream trellises which form sympathetic backgrounds for drooping clusters of pink roses, tawny nasturtiums, multicolored sweet peas, pale purple wistaria, heavy-headed lilacs or sleepy red poppies.



The following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY by MUNN & Co., Solicitors of American and foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE, AND TILE.

ARTIFICIAL STONE. H. Mielek, New York, N. Y. Oc-	
tober 14	711,254
BUILDING MATERIAL. A. Standau, Terre Haute, Ind.	
October 21	711,541
INLAID TILE FLOOR. E. M. Henderson, New York,	
N. Y. October 21	711,661
RAFFLING TILE. H. L. Van Zile, New York, N. Y.	
October 28	712,158
TILING. C. Worth, Newark, N. J. October 28.....	712,168

CARPENTRY.

WEATHER STRIP. M. K. Little, Camden Point, Mo.	
October 7	710,478
COMBINATION STORM AND SCREEN WINDOW. C. W.	
Berger, Milwaukee, Wis. October 7	710,661
PRISMATIC GLASS WINDOW. G. K. Cummings, Center	
Rutland, Vt. October 7	710,434
COMBINED CARPENTERS' BENCH AND VISE. G. W.	
Raynor, Williamston School, Pa. October 7.....	710,713
WEATHER STRIP. W. Steger, Marietta, Ohio. Oc-	
tober 7	710,926
WINDOW. J. L. Stieglitz, Louisville, Ky. October 14.	
711,082	
WINDOW. E. A. Sanders, Saginaw, Mich. October 14.	
711,179	
WEATHER STRIP. B. F. Grandstagg, Peru, Ind. Oc-	
tober 21	711,491
WINDOW FRAME. K. Jorgensen, Bergen, Norway.	
October 21	611,633
WINDOW FRAME. F. G. Oldenburg, Altoona, Germany.	
October 28	712,403
DOOR. J. L. Young, New York, N. Y. October 28....	712,449

CONSTRUCTION.

BUILDING CONSTRUCTION. W. F. Gilles, Chester, Pa.	
October 7	710,679
MOLD FOR BUILDING CONCRETE OR CEMENT WALLS.	
W. H. Cadwell, Williamston, Mich. October 7.....	710,749
BUILDING WALL. Zimmermann and Doerr, Chicago, Ill.	
October 7	710,830
CORNER STRIP. W. N. McDonald, Havana, Cuba.	
October 7	710,880
SHEET METAL WINDOW. C. D. Pruden, St. Paul, Minn.	
October 21	711,526
REVOLVING DOOR STRUCTURE. T. Van Kennel, New	
York, N. Y. October 21	711,803
MACHINE FOR LAYING BRICKS FOR BUILDING PUR-	
POSES. J. H. Knight, Barfield, England, October	
28	712,075
ROOF. F. L. Kane, New York, N. Y. October 28.....	712,193
CONSTRUCTION OF FLOORS, ETC. F. L. Ellingwood, New	
York, N. Y. October 28	712,278
COLUMN CAPITAL AND ATTACHMENT. C. H. Howland-	
Sherman, Washington, D. C. October 28.....	712,299
METHOD OF LAYING ROOFS. F. L. Kane, New York,	
N. Y. October 28	712,308

ELEVATORS.

ELEVATOR. J. D. Ihlder, Yonkers, N. Y. October 7..	710,581
ELECTRIC ELEVATOR. R. C. Smith, Yonkers, N. Y. Oc-	
tober 7	710,625
ELEVATOR. S. R. Harris, Knoxville, Pa. October 7..	710,686
ELEVATOR. C. W. Kirsch, Chicago, Ill. October 21..	711,726

FIREPROOFING AND FIRE EXTINGUISHMENT.

FIREPROOF CONSTRUCTION FOR BUILDINGS. P. F.	
Brandstedt, Washington, D. C. October 7.....	710,836
SELF-CLOSING SASH FOR FIREPROOF WINDOWS. C. D.	
Pruden, St. Paul, Minn. October 21	711,527
AUTOMATIC FIRE EXTINGUISHER. J. B. Miesse, Read-	
ing, Pa. October 21	711,707
APPARATUS FOR AUTOMATICALLY OPERATING FIRE	
DOORS. C. R. Bumbarger, Kansas City, Mo.,	
October 28	712,256
TILTING EXTENSION FOR FIRE ESCAPES. M. Cody,	
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A MODERN DWELLING AT OGONTZ, PA.

THE modern dwelling which is illustrated on page 116 has been erected for William B. Roberts, Esq., at Ogontz, Pa. The underpinning and the first story are constructed of rock-faced blue stone, laid up in a random manner. The second story is of wood, and the exterior framework is covered with matched sheathing and then shingles, which are painted white. The trimmings are also painted white. The roof is covered with shingles and is stained a moss-green. Dimensions: Front, 45 ft.; side, 37 ft., exclusive of porch. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.; third, 8 ft.

The entrance is through a "Dutch" door into a large hall, which is trimmed with oak, and contains an ornamental staircase with spindle balusters, rail, and newel. The windows in hall and on stairway landing are of stained glass and of heraldic design. The parlor is separated from the hall by three arches, which are supported on columns. It is trimmed with oak and has paneled divans built in and an open fireplace of buff brick, with the facings of the same and a dressed Indiana limestone cap. The hearth is of Dutch tile and the mantel of oak. The dining-room is also trimmed with oak, and has a plate rack and a wooden cornice. The butler's pantry is trimmed with whitewood and is furnished with drawers, cupboards, and marble bowl. The kitchen is trimmed with whitewood, and it contains a wainscoting of white glazed tile, a slate drip and sink, range, pantry, etc. The laundry is fitted up with Alberene wash trays.

The second story is trimmed with white pine and treated with white paint. There are three bedrooms, provided with ample closets, and a bathroom on this floor. The latter is wainscoted with oak, and it has a tiled floor, porcelain fixtures, and exposed plumbing, all nickelplated. There are three bedrooms and a trunk room on the third floor. A cemented cellar contains a furnace, cold storage room, and ample bins, etc. Mr. Charles Barton Keen, architect, 1604 Chestnut Street, Philadelphia, Pa.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.

A RESIDENCE AT ATLANTA, GA.

THE residence which is illustrated on page 120 has been erected for Mr. W. L. Cosgrove, at Atlanta, Ga. The underpinning and chimneys are built of rock-faced stone, laid up in cement, and pointed in black. The superstructure is of wood and is covered on the exterior framework with matched sheathing and then shingles, which are stained a dark gray. The trimmings are painted white. The gable ends are coated with plaster and are painted a cream white. The roof, which is covered with shingles and stained red, is unusual in its treatment, presenting a strong Dutch feeling. Dimensions: Front, 45 ft.; side, 64 ft., exclusive of piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft.

The hall is treated with Flemish oak and it contains a paneled wainscoting, ceiling beams, and a staircase of handsome design, starting from a broad landing provided with a paneled seat, and a newel post formed of a cluster of balusters. The living-room, extending the entire depth of the house, is finished in Flemish oak, and has book-cases built in and an open fireplace furnished with mosaic tiled facings and hearth, and a mantel with a shelf supported on corbel brackets. The dining-room is a very handsome apartment, and is treated with Flemish oak. The walls are paneled to the height of eight feet and capped with a plate-rack. A buffet, built in, with leaded glass doors, and a beamed ceiling are the other features of this room. The butler's pantry is well fitted with the usual fixtures, and is also provided with a large pantry for stores. The kitchen is provided with all the best modern conveniences. The rear hall forms an access to the toilet and to the cellar, and also to the second and third floors.

The second story is trimmed with white pine and treated with white enamel. It contains the owner's room, of unusual dimensions, and provided with large closets, three guests' rooms, and a bathroom, which is furnished with porcelain fixtures and exposed nickel-plated plumbing. The third floor contains the servant quarters and ample storage room. A cemented cellar contains a furnace-room, laundry, coal and wood bins. Cost, \$9,000, complete. Messrs. Bleckley & Tyler, architects, Atlanta, Ga.

The engravings were made from photographs taken specially for the BUILDING MONTHLY.



FIREPROOF SPECIALTIES.

THE employment of steel in building is extending so rapidly that it is now a competitor with the commonly used materials in roofs, floors, ceilings, and walls. Its advantages in strength, durability and convenience, its absolute fireproofness and cubic economy of space combine to make it safe, permanent, and cheap. Prominent among the improvements wrought in this line are those advanced by the Berger Manufacturing Company, in multiplex plates made from black and galvanized sheet steel for floors, roofs, supports of concrete in sidewalk and vault covering construction. It is particularly adapted for sidewalks and floors on bridges; floors in power houses, elevators, mills, factories, and wherever a fireproof floor of great strength and light construction is required. The manufacture of multiplex steel plate is no longer an experiment. The sheet steel is treated so that it acquires strength and resistant power, and is wonderfully adapted for a firm, light, fireproof flooring. The multiplex plate is made in various gauges from No. 16 to No. 24. They are cut to fit and to cover the floor space, and laid with the end bearing on the I-beam or wall. All plates interlap at the ends and the sides, the concrete then put on, slightly tamped, and left to set, and the floor is ready for any kind of finish, whether of wood, tile, or cement. Studs, angles, furring strips and sockets; fireproof partitions; ceiling and wall furring in combination with the plates complete the make up of the fireproof room. The company has perfected sidewalk lights for illuminating vaults and basements. In this method of lighting vaults, the plate is used for the actual pavement, while the cellar is bridged by a series of galvanized iron forms with apertures for the reception of the glass. The under side has a bright appearance, acting as a reflector and easily kept clean. The works of the Berger Company, at Canton, Ohio, also produce tubular lanterns, lamps, torches, oil cans, spray pumps, and sheet and metal specialties. The premises occupy a large area of ground, and enjoy a position very accessible to railroad and other transportation facilities.

ALTERATIONS IN THE WHITE HOUSE AT WASHINGTON.

THE present changes made in the White House have been very extensive, and some of the improvements have been made along the lines of enlargement planned by Thomas Jefferson. Superintendent French, in charge of Public Buildings and Grounds, has advanced the operations on the great mansion so rapidly that the construction work was ended on time, and then put into the hands of the finishers. The entrance to the building, for social events, is by the way of the old driveway, now reopened, and goes through the long colonnade wing on the east side. The restoration of the east wing and the opening of the old east drive make the south side of the House the front, as first intended. In the past, visitors went through a wide doorway and received their first impressions from a stained glass partition, mostly opalescent in color and texture. When the alterations are complete, the view from the same door will comprise a series of heavy Greek columns which serve to separate, in appearance merely, the present vestibule and the main corridor. Instead of the main floor of the White House consisting of many small rooms, it is now changed to a few large ones; corridors have been cleared which had been crowded for scores of years, and new paint on wall spaces supplants the yellow conditions prevalent since the Rebellion. The stairway on the first floor is as wide as one of the main stairs of the Capitol. It is built of clear marble, beautifully grained. The aspect of the main floor is one of simplicity and spaciousness.

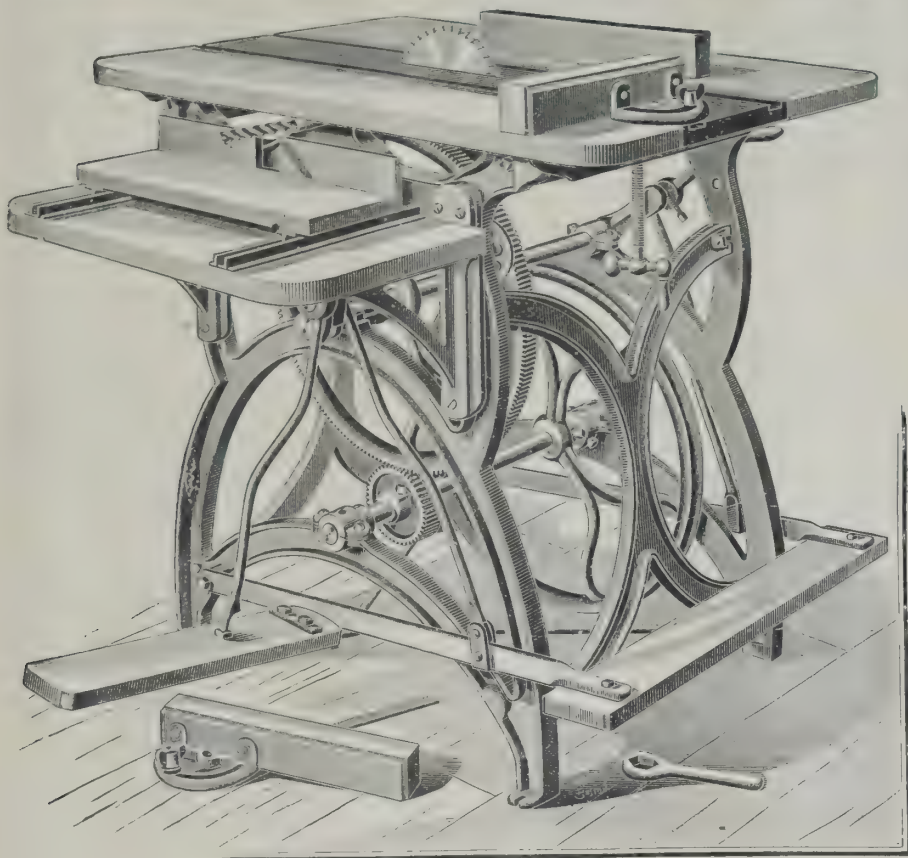
The building to be used for offices is of one story. The walls are strong, the space ample, and it is divided into a sufficient number of rooms to relieve the White House effectually. The Executive Mansion and office building are substantially roofed, and in such an artistic and ornamental fashion that the effect is very harmonious. The material used is of the best quality of American tin, supplied by the local wholesale metal house of Rudolph, West & Co., and manufactured expressly for the White House contract by the American Tin Plate Company at its Martins-Ferry plant. It is of the "U. S. Eagle N. M. Brand." Officials in the office of the Superintendent of Public Buildings and Grounds pronounce the roofing a splendid bit of workmanship, and the authorities are very much gratified by favorable criticisms of architects on this branch of the great improvements.

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MARSTONS' HAND & FOOT POWER CIRCULAR SAW.



Iron Frame, 36 inches high.

CENTRE PART OF TOP IS MADE OF IRON ACCURATELY PLANED, with grooves on each side of saw for gauges to slide in.

Steel shafts and best Rabbitt metal boxes. Gears are all machine-cut from solid iron. Two 7-inch saws and two crank handles with each machine.

Boring table and side treadle. Weight, complete, 350 lbs. Send for catalogue.

J. M. Marston & Co., 199 Ruggles St., Boston, Mass.

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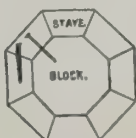
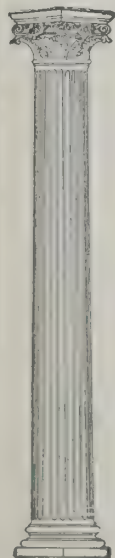


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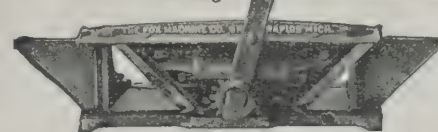
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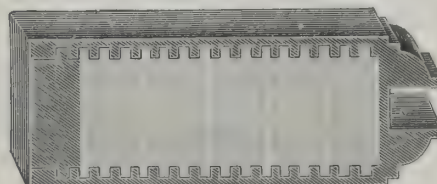
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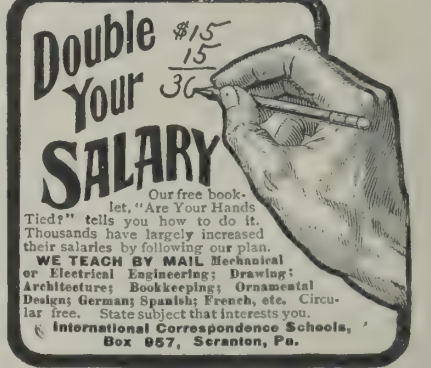
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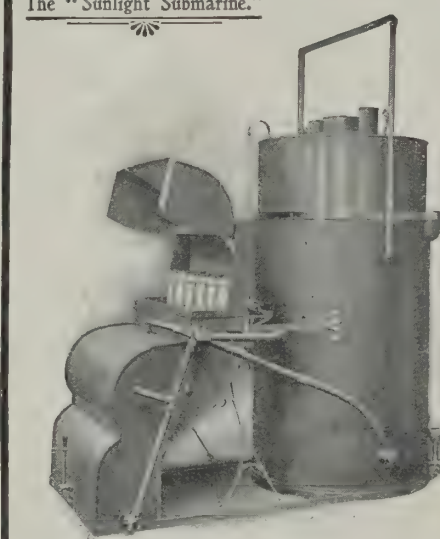
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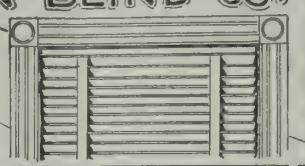
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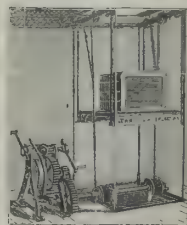
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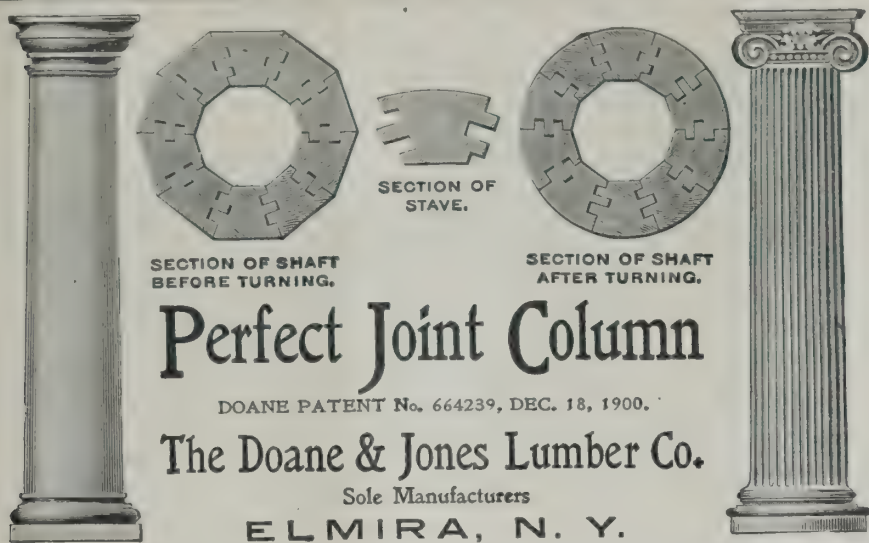
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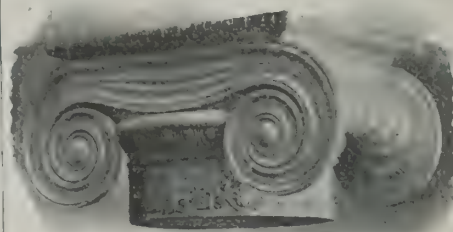
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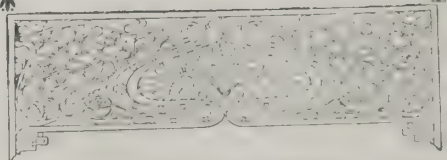
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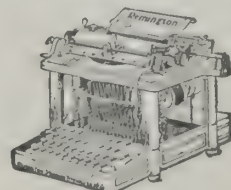
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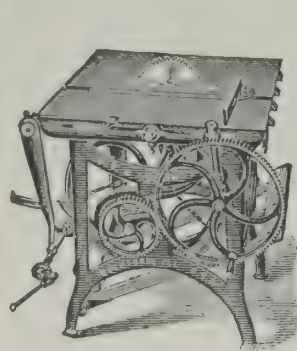
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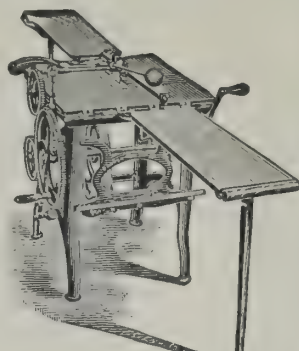
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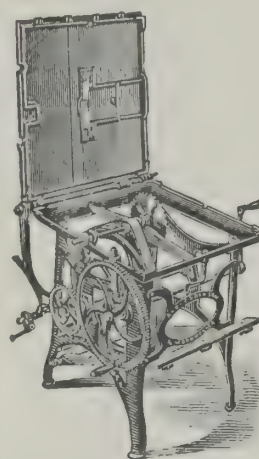
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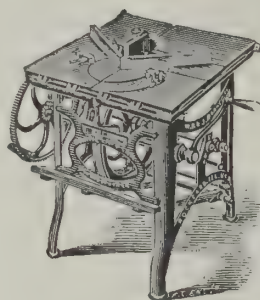
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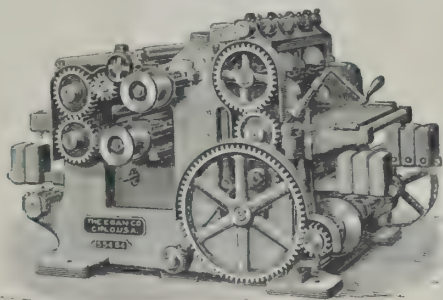
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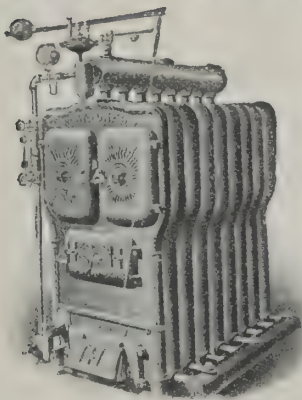
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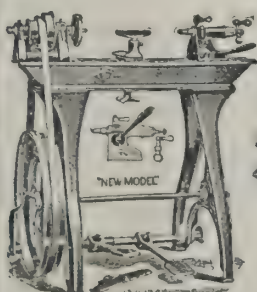
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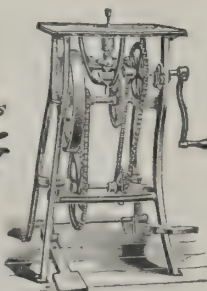
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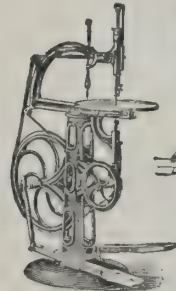
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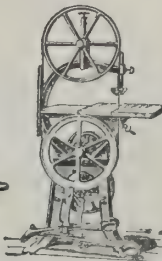
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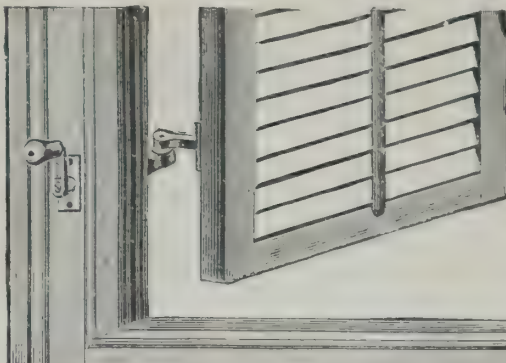


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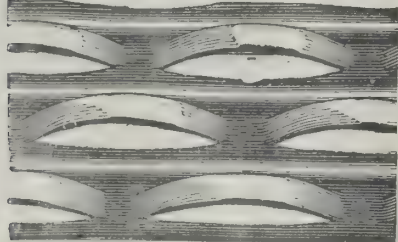
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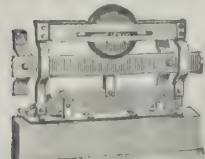
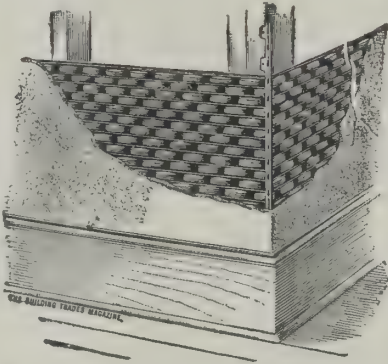
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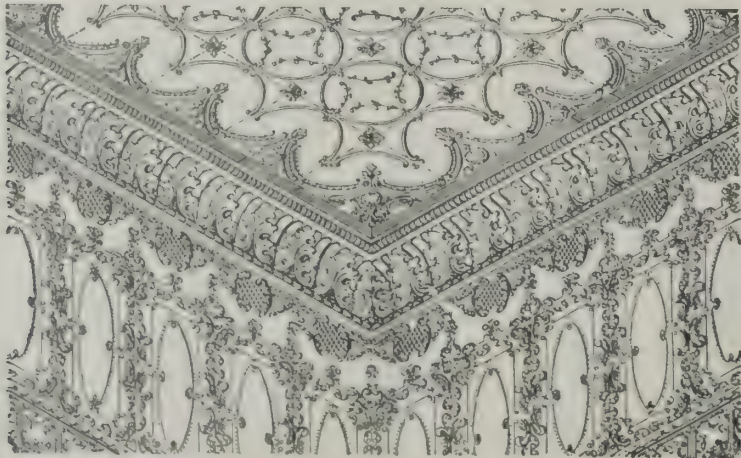


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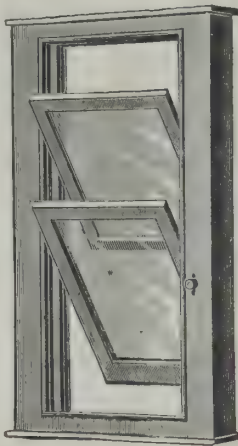
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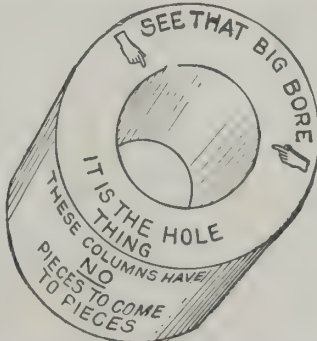
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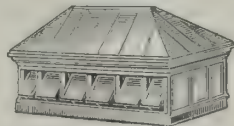
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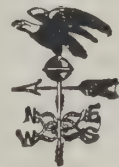
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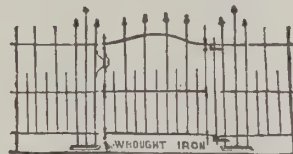


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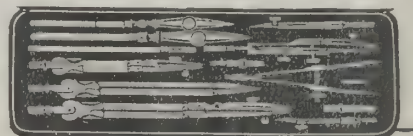
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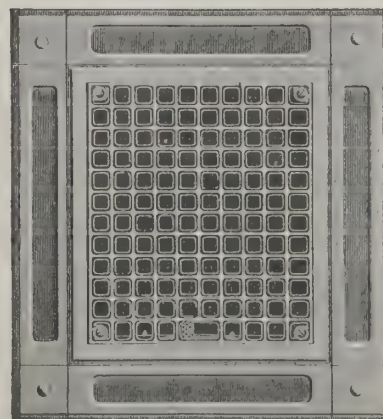
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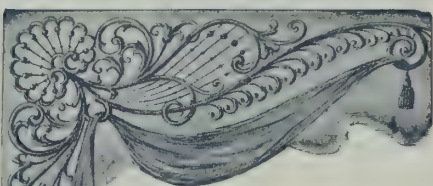


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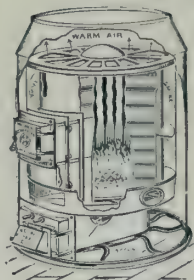
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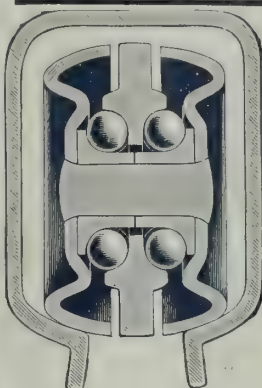


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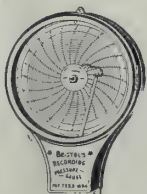
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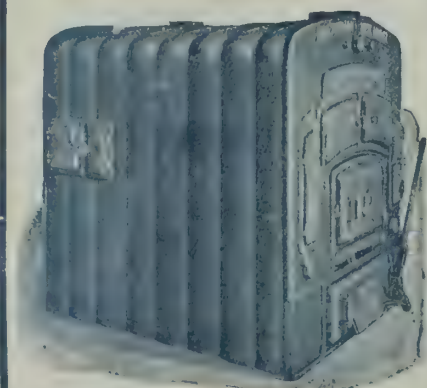
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